ARATUS: A COMPARATIVE STUDY OF LATIN TRANSLATION

FROM ARATUS TO THE <u>ARATUS LATINUS</u>: A COMPARATIVE STUDY

OF LATIN TRANSLATION

By

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ABSTRACT

The Phaenomena, written by Aratus of Soli in 276-274 B.C., enjoyed

immense popularity in antiquity and was translated into Latin verse by

Marcus Tullius Cicero, Germanicus Caesar and Rufius Festus Avienus, and

into Latin prose by an anonymous author writing in the seventh century

A.D. Previous studies of these works have provided important observations

about individual aspects of the Latin poems and this thesis seeks to add

to the understanding and appreciation of the works by comparing in detail

the three verse translations and, where appropriate and possible, the

prose Aratus Latinus, with the Greek original and with each other.

The first chapter examines the problem of the popularity of the

Greek Phaenomena down to the Renaissance and the second chapter investi-

gates the nature of translation as a Roman literary phenomenon. The five

chapters which follow include statistical surveys, based on both scansion

of the poems and on computer-concordances compiled for the thesis, and

stylistic analyses in order to elucidate the degree to which the trans-

lations were dependent upon and independent from the Greek model and the

similarities and differences among the translations themselves. Chapter

III investigates four aspects of metre (metrical patterns, first and

fourth foot, elision, and caesurae and diaereses). Chapter IV examines

the quantity of sound and, in particular, initial consonantal alliteration.

Chapter V contains a discussion of compound adjectives and epithets and

Chapter VI, a discussion of special astronomical vocabulary (words of

brightness, color terms and four special words: uis, laetus, tristis,

<u>crinis</u>). Chapter VII investigates Greek words and Latin archaisms in the Latin translations and establishes evidence for Cicero's creation of a uniquely Latin poem through the use of Latin archaisms. The final chapter discusses further the emergence of a distinctly Roman <u>Phaenomena</u>, for Germanicus in the use of references to aspects of Roman life and for Avienus in the area of borrowings from the previous Latin translations of Aratus' poem. It concludes with a study of the ways in which each of the verse translators alter the emphasis of the original by reshaping its theme, thereby emphasizing the extent to which the translators went beyond their Greek model to create individual and original Latin works.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF SUPPLEMENTARY TABLES

III. METRE

V. COMPOUND ADJECTIVES AND EPITHETS

VI. SPECIAL ASTRONOMICAL VOCABULARY

VII. GREEK WORDS AND LATIN ARCHAISMS

PREFACE

The _Phaenomena_[1] was written by Aratus of Soli when he was in attendance at the Macedonian court of Antigonus Gonatas. After its publication in 276-274 B.C., the work enjoyed immense popularity and was translated into Latin verse by Marcus Tullius Cicero around 90 B.C.,[2] by Germanicus Caesar, son of Drusus and nephew to the emperor Tiberius, who addressed his own poem to the deified Augustus,[3] and by Rufius Festus Avienus,[4] who wrote in the mid-fourth century A.D. An anonymous prose translation, dated to the seventh century A.D. is known today as the _Aratus Latinus_.[5]

Study of the individual Latin _Phaenomena_[6] of Cicero, Germanicus and Avienus began in earnest around the turn of this century and was facilitated by the introduction of new texts of Germanicus' _Phaenomena_ by A. Breysig (1867) and of Avienus' _Phaenomena_ by A. Holder (1887). At this early stage, critics confined themselves to specific comparative studies of the individual Latin poems. G. Sieg ("De Cicerone Germanico Avieno Arati Interpretibus", Halle, 1886), for example, examined separately the three verse translations and concentrated his investigation on technical features such as errors, omissions, expansions and contractions which were evident through comparison with the original Greek poem. J. Maybaum ("De Cicerone et Germanico Arati Interpretibus", Rostoch, 1889) followed an approach similar to that of Sieg by investigating the two translations by Cicero and Germanicus. Maybaum devoted more attention to Germanicus' poem[7] but addressed problems particular to each translation: possible

1

interpolations in Cicero's translation, evidence for the use of the commentary of Attalus by Cicero,[8] the date of Germanicus' poem and his employment of the commentary of Hipparchus.[9] C. Ihlemann ("De Rufi Festi Avieni in Vertendis Arateis Arte et Ratione", Göttingen, 1909) then provided a critical survey of Avienus' translation alone, commenting on omissions, additions and the use of myth in the poem. Thirty-three years later, W. Leuthold ("Die Übersetzung der Phaenomena durch Cicero und Germanicus", Zürich, 1942) presented a study of the two translations of Cicero and Germanicus, limiting his topic to a discussion of sources, lexicon, and verse technique for both poems as well as to stellar mythology in Germanicus' work. More recently, P.C. Brush ("Cicero's Poetry", Yale University, 1971) has considered in detail problems such as metre, stock verbs and the use of special vocabulary. Similarly D.P. Kubiak ("Cicero, Catullus, and the Art of Neoteric Translation", Harvard University, 1979) has examined Cicero's translation of Aratus' poem in comparison with the translations of Catullus extant in Carmina 51 and 66.

All of these works provide important observations about individual aspects of the translations, but in the specific confines of their investigations they do not offer a description of the nature of translation as a Roman literary phenomenon. More importantly, they overlook the opportunity for comparative study of the works of Cicero, Germanicus, Avienus and the author of the Aratus Latinus which together comprise the largest extant corpus in antiquity and the Middle Ages of Latin translations of a single Greek poem. This thesis, therefore, seeks to provide fresh insights by comparing the three verse translations and, where appropriate and possible, the prose Aratus Latinus, with the Greek original and with each

other in order to demonstrate the extent to which the translators borrowed
elements from the Greek poem and the extent to which they went beyond
their model to create original Latin works.[10] The limitations of the pre-
vious studies as well as the publication of new texts of Cicero's poem
by J. Soubiran (1972), of Germanicus' work by A. Le Boeuffle (1975) and of
Avienus' poem by J. Soubiran (1981) together with commentaries on Germani-
cus' poem by D.B. Gain (1976) and G. Maurach (1978) now make such a study
appropriate and, perhaps, imperative.

In two introductory chapters we will examine the role of the Latin
translations in the popularity of the Greek Phaenomena and the significance
of the translations for the history of translation at Rome. The five
chapters which follow include statistical surveys, based on both scansion
of the poems and on computer-concordances compiled for the thesis, and
stylistic analyses in order to elucidate both the degree to which the trans-
lations were dependent upon and independent from the Greek model and the
similarities and differences among the translations themselves. The
final chapter contains a discussion of references to Roman life, similari-
ties among the verse translations and theme which exemplify the unique
influence of environment on the translations and the individuality of each
of the works.

The following editions have been used as the basis for this study;
Arati Phaenomena, edited by E. Maass (1893, reprinted 1964); Cicéron:
Aratea, Fragments Poétiques, edited by J. Soubiran (1972); Germanicus:
Les Phénomènes d'Aratos, edited by A. Le Boeuffle (1975); Rufi Festi Avieni
Aratea, edited by A. Breysig (1882)[11] and Aratus Latinus Cum Scholiis

found in <u>Commentariorum in Aratum Reliquiae</u> (pp. 172-306), edited by E. Maass (1898, reprinted 1958).[12]

     For the sake of uniform orthography and after the pattern established in Soubiran's edition of Cicero's poem, lower case <u>u</u> has been used throughout in all quoted matter in place of lower case <u>v</u> regardless of the reading of the original text. Notes relevant to each chapter have been placed at the end of each chapter. Two appendices are found at the end of the work. The Bibliography contains a list of all books and articles cited in the notes. Abbreviations for journals and other items conform to the indices of periodicals found in <u>l'Année Philologique.</u>

NOTES

[1]V. Buescu, ed., Cicéron: Les Aratea (Hildesheim: Georg Olms Verlagsbuchhandlung, 1941, repr. 1966), p. 18 notes that the Phaenomena was divided into two parts, the Φαινόμενα and Διοσημεῖαι, by grammarians. The second Vita for Aratus, however, establishes a division into three parts corresponding to verses 1-450, 451-732 and 733-1154. For this Vita see J. Martin, ed., Scholia in Aratum Vetera (Stuttgart: B.G. Teubner, 1974), pp. 11-13. Compare also G.R. Mair, ed., Aratus (Cambridge, Mass.: Harvard University Press, 1977), p. 204.

[2]The date of Cicero's translation of the Phaenomena of Aratus is a much debated point. Cicero himself states (De Natura Deorum 2.41.104) that he translated the poem admodum adulescentulus, a fact which would indicate that he was not yet twenty years old. In a letter to Atticus dated to 60 B.C., (Epistula ad Atticum 2.1.11), however, he writes: Prognostica mea cum oratiunculis propediem exspecta. This seeming discrepancy has led to several interpretations for the date of the poem which are summarized in J. Soubiran, ed., Cicéron: Aratea, Fragments Poétiques (Paris: Les Belles Lettres, 1972), p. 10. The general consensus among scholars today is that Cicero translated the entire poem in 90/89 B.C. and sent a copy of the Prognostica portion to Atticus in 60 B.C. See also Soubiran, Cicéron, pp. 9, 12; P.C. Brush, "Cicero's Poetry" (Ph.D. dissertation, Yale University, 1971), pp. 14-20 and E. Panichi, Gli Aratea e I Phaenomena (Milan and Rome and Naples: Società Editrice Dante Alighieri, 1969), p. xii. W. Leuthold, "Die Übersetzung der Phaenomena durch Cicero und Germanicus" (Doctoral dissertation, Zürich, 1942), p. 11 argues for a date of 86 B.C. for the entire poem. Buescu, p. 34 and G. Sieg, "De Cicerone Germanico Avieno Arati Interpretibus" (Dissertatio Inauguralis, Halle, 1886), p. 7 holds that the problem cannot be solved.

[3]The identification of the genitor to whom Germanicus dedicated his poem is a controversial subject. Most modern critics agree that the author of the translation was Germanicus, son of Drusus, but D.B. Gain, ed., The Aratus ascribed to Germanicus Caesar (London: The Athlone Press, University of London, 1976), pp. 17-20 argues strongly for the authorship of Tiberius, although he feels that the identification finally is insoluble. He notes (p. 20) that if Tiberius is the author, then Augustus is the genitor and if Germanicus is the author, then Tiberius is the genitor. Leuthold, p. 52 and J. Maybaum, "De Cicerone et Germanico Arati Interpretibus" (Dissertatio Inauguralis, Rostoch, 1889), p. 27 argue that the poem is addressed to Tiberius by his nephew Germanicus. A more reasonable point of view, which is supported by the poem itself, however, is that Germanicus dedicated his translation to the deified Augustus, for which see A. Le Boeuffle, ed., Germanicus: Les Phénomènes (Paris: Les Belles Lettres, 1975), pp. xii-xiii; C. San-

tini, Il Segno e La Tradizione in Germanico Scrittore (Rome: Cadmo editore, 1977), p. 27 and P. Steinmetz, "Germanicus, der römische Arat", Hermes, 94 (1966), p.454. The date of the poem is also problematic. Maybaum, p. 27 states that the uirilis animus evident in the poem indicates that it was written when Germanicus was older. Santini, p. 32 notes that the work was published after the death of Augustus, around A.D. 17, but that it was written three or four years earlier. Le Boeuffle, Germanicus, p. ix notes that it was written between A.D. 14 and A.D. 19 while L. Cicu, more recently, in "La data dei Phaenomena di Germanico", Maia, 31 (1979), p. 142 argues on the basis of evidence from Ovid's Epistulae ex Ponto that the poem was written between A.D. 13 and A.D. 15, when Germanicus was on campaign, and finished (p. 144) by A.D. 17.

[4]Some debate surrounds the actual name of the poet Avienus. A. Cameron, "Macrobius, Avienus and Avianus", CQ, 17 (1967), p. 392 has argued that the name should be "Avienius". More recently, J. Soubiran, ed., Aviénus: Les Phénomènes d'Aratos (Paris: Les Belles Lettres, 1981), pp. 16-19 argues convincingly for the traditional name of "Avienus", which will be used throughout this thesis.

[5]For the date of the Aratus Latinus see H. Le Bourdelles, "Naissance d'un serpent: Essai de datation de l'Aratus Latinus merovingien" in J. Bibauw, ed., Hommages à Marcel Renard (Brussels: Latomus, Revue d'Etudes Latines, 1969), I, 514. Le Bourdelles presents the termini, A.D. 636 and A.D. 735.

[6]The actual titles of the verse translations are uncertain. Soubiran, Cicéron, and Buescu entitle Cicero's translation, Aratea, while Brush, p. 14 notes that the title Carmina Aratea is generally accepted but later grammarians called it Aratus which he has adopted for his own discussion. Gain, p. 17 states that the correct title for both the translations of Cicero and Germanicus is Aratus; Phaenomena is a subtitle. Le Boeuffle, Germanicus, refers to Germanicus' translation both as Arati Phaenomena and Aratea. Soubiran, Aviénus, refers to Avienus' translation as Arati Phaenomena while Sieg, p. 30 offers the titles Aratus, Arati Phaenomena or Arati Phaenomenon Liber for the translation of Avienus. In the interest of uniformity and clarity, the title Phaenomena has been used in this thesis for each of the verse translations.

[7]For Maybaum's judgment of Cicero's translation see pp. 15-16. Leuthold, p. 29 also criticizes Cicero's translation because it lacks the charm and simplicity of Aratus' poem. Personal opinion is often injected into studies of the three translations and the translation of Avienus seems to be the most favored. Sieg, p. 44 states that the poem of Avienus is superior to that of Cicero and Germanicus. Buescu agrees with Scaliger whom he quotes (p. 20 n. 2): "Avienus est optimus Arati non solum paraphrastes sed etiam interpres".

[8]Compare Leuthold, pp. 13-15 who states that Cicero used scholia and a globe of the heavens, but (p. 25) barely knew the commentaries of Attalus or Hipparchus. Soubiran, Cicéron, p. 93 notes that Cicero probably looked to the scholiasts of Aratus for material to use in his poem.

[9]It is debatable whether Germanicus had the commentary of Hipparchus at hand or whether he used it second-hand. Maybaum, pp. 40-42 believes that Germanicus had the commentary at hand while Leuthold, p. 58 states that he used it second-hand. Le Boeuffle, Germanicus, p. xxiii concurs that Germanicus knew Eudoxus, Eratosthenes and Hipparchus through intermediary works. Gain, p. 14 states that there is no way of knowing whether Germanicus used Hipparchus directly or indirectly.

[10]Most critics fail to consider the translations of Aratus' Phaenomena as original Latin poetry. Compare Buescu, p. 34 who states that Cicero's translation would serve as an aid for the Greekless reader and as an exercise, and Soubiran, Aviénus, p. 75 who states: "Aviénus n'est à aucun titre un ποιητής. Traducteur, il cherche le support de la pensée d'autrui. Il n'a ni idées originales, ni dons d'expression ferme et énergique". This is, perhaps, unfair criticism. See, for example, Chapter VIII for a refutation of this statement. Compare Brush, pp. 173, 231 and Steinmetz, p. 451.

[11]Unfortunately, Soubiran's text of Avienus' translation arrived too late to be used for this thesis. The emendations found in the new text, however, do not substantially affect the results determined in our examination of the poem. See Appendix I for a comparison of the texts. I have, however, used Soubiran's notes and introduction to the work.

[12]No new text of the Aratus Latinus has yet been forthcoming. In a letter dated 12 November 1979, J. Soubiran has informed me that H. Le Bourdelles of the Université de Lille has been working on a text of the Aratus Latinus in a thesis.

THE POPULARITY OF THE PHAENOMENA

The Phaenomena of Aratus is remarkable in the corpus of Greek and Latin literature, for the evidence which attests to its history is both early and abundant.[1] Numerous works, written as explanatory guides to the poem, and the presence of Latin translations and Greek and Latin testimonia indicate that the text was read and admired from its first appearance in 276-274 B.C. to the end of the Middle Ages. An investigation of the four Latin translations of Aratus' Phaenomena should therefore begin with a discussion of the popularity of the Greek poem itself throughout antiquity. The popularity of the work has remained problematic and this question has attracted the attention of several modern scholars. Because their theories for the appeal of Aratus' work in the ancient world are all, in some way, unsatisfactory, in this chapter, a solution which has thus far been overlooked will be suggested. This explanation will aid us in understanding the process of the transmission of the Phaenomena from antiquity, the importance of the four Latin translations and the value which was placed on both the Greek original and the translations up until the Renaissance.

The study of the Phaenomena in antiquity generated a large literature which included Vitae, commentaries, introductions, scholia and Latin translations. Four biographies of Aratus based on a work written around 150 B.C. by Boethus and the ninth century A.D. literary dictionary Suda contain information about the poet.[2] Fragments of the commentary of Attalus

of Rhodes, written before the second century B.C., the lengthy commen-
tary of Hipparchus of Nicaea from the second century B.C. and that of
Achilles, written in the third century A.D., have survived.[3] In addition,
several anonymous commentaries are extant and the names of at least twenty-
seven other authors who wrote on the Phaenomena are known.[4] One introduc-
tion, among many other anonymous ones, can be ascribed with certainty to
Achilles and a large corpus of scholia to the text, which has its own his-
tory beginning as early as the third century A.D., provides evidence that
the poem was known throughout antiquity.[5]

Literary support for the popularity of the poem comes mainly from
the lengthy translations of Cicero, Germanicus, Avienus and the anonymous
author of the Aratus Latinus, but fragments of the translations of Varro
Atacinus and Ovid are also extant and the Scriptores Historiae Augustae
notes that Gordian, patterning his efforts after those of Cicero, trans-
lated the Phaenomena in the third century A.D.[6] On a smaller scale, Ver-
gil translated portions of the last half of Aratus' poem, the Διοσημεῖαι,
in Georgic 1.356-465[7] and Manilius showed himself to be much indebted to
the astronomical information presented in the Phaenomena when composing
the first book of his own Astronomica.

To this substantial evidence for the importance of the Phaenomena
in antiquity we may add the allusions found in literary sources from the
Hellenistic age down through the Middle Ages. Such references kept alive
the name of the author and his work. Aratus' younger contemporary, Cal-
limachus, for example, praised the Phaenomena in Epigram 27 where he com-
mented that the theme and manner of both Aratus' poem and Hesiod's works
were comparable:[8]

Ἡσιόδου τό τ' ἄεισμα καὶ ὁ τρόπος· οὐ τὸν ἀοιδῶν
    ἔσχατον, ἀλλ' ὀκνέω μὴ τὸ μελιχρότατον
τῶν ἐπέων ὁ Σολεὺς ἀπεμάξατο. χαίρετε λεπταὶ
    ῥήσιες, Ἀρήτου σύντονος ἀγρυπνίη.

In Callimachus' learned opinion, Aratus and Hesiod shared subject matter,
didactic pose and a similar approach to metrical matters. But more im-
portantly, Callimachus called Aratus' verses λεπταὶ ῥήσιες, (subtle or
refined discourses), words of high praise for an important contemporary
poem.[9]

Similar praise is expressed in Latin by C. Helvius Cinna, a friend
of Catullus. Cinna, a neoteric poet, was tutored by the influential Par-
thenius who brought Callimachus and his aesthetic theories to Rome after
he had been captured by a relative of Cinna in the Mithridatic War.[10] In
Bithynia, Cinna had acquired an unusual and elegant copy of the Phaeno-
mena which was written on mallow bark. He sent it to a friend with four
attached verses:

Haec tibi Arateis multum uigilata lucernis
    Carmina, quis ignis nouimus aetherios,
Leuis in aridulo maluae descripta libello
    Prusiaca uexi munera nauicula.

The words multum uigilata lucernis carmina echo Callimachus' own praise
of Aratus' work, σύντονος ἀγρυπνίη, "intense vigil" while leuis, "smooth",
refers not only to the physical character of the book, but also to the
laudatory λεπταὶ ῥήσιες from Callimachus' epigram.[11] Aratus, along with
the other Hellenistic poets, attracted the interest of the neoteric poets,
for, as Cinna's verses indicate, the tenets of Callimachus were also their
concerns.[12]

Like Cinna, Ovid praises the Phaenomena and its author in Amores
1.15.16. In a general discussion of the immortality of poetry, Ovid ex-

claims, cum sole et luna semper Aratus erit. Although the line may be

interpreted as a simple reference to Aratean subject matter, it is, more

appropriately, a statement of appreciation and a prophecy of everlasting

fame for both poet and poem, since according to Ovid, Aratus has risen

into the heavens which he had so well described. Another reference to

the astronomical content of the Phaenomena may be found in Petronius'

Satyricon 40. In this portion of the "Cena", Trimalchio delivers a long

lecture on the signs of the zodiac to his dinner guests who, in between

courses, were quick to claim that Trimalchio was more knowledgeable of

the heavens than either Hipparchus or Aratus:

> "Sophos" uniuersi clamamus et sublatis manibus
> ad camaram iuramus Hipparchum Aratumque comparan-
> dos illi homines non fuisse . . .

The phrase Hipparchum Aratumque attests to the astronomical authority of

Aratus, since in this instance the poet is linked with one of the great-

est astronomers of antiquity.

Pliny the Younger, however, displays a different appreciation of

the Phaenomena in the description of his villa (Epistula 5.6.43):

> Vides ut Aratus minutissima etiam sidera
> consectetur et colligat; modum tamen seruat.
> Non enim excursus hic eius, sed opus ipsum est.

In praising the literary qualities of the poem, its carefully wrought

structure and balanced proportion, Pliny provides an indication that the

notable merits which had brought initial fame to the work were still visi-

ble to a Roman audience in the first century A.D.

Later comments on the Phaenomena and its author, in comparison,

become more specific. Ammianus Marcellinus, writing in the fourth cen-

tury A.D., for example, specifically invokes the myth of Dikē (found in

lines 96-126 of the _Phaenomena_) in his history, 22.10.6. The historian

reports that the Emperor Julian made this statement about the clemency

and good judgment that he showed in court cases:

> . . . uetus illa Iustitia quam offensam uitiis
> hominum, Aratus extollit in caelum, imperante eo
> reuersa ad terras . . .

These words provide proof of the reputation of Aratus in the fourth cen-

tury A.D. and indicate that the fame of the Dikē passage of Aratus had

far surpassed that of the original version of Hesiod.

St. Augustine, on the other hand, disapproves, in general, of the

astronomical content of the poem and in _De Civitate Dei_ 16.23 he criti-

cizes Aratus' attempt, sacrilegious in his view, to enumerate the stars

in heaven:

> Postremo quicumque uniuersum stellarum
> numerum comprehendisse et conscripsisse iac-
> tantur sicut Aratus uel Eudoxus uel si qui
> alii sunt, eos libri huius contemnit auctoritas.

Augustine, commenting on the incorrect premise upon which Aratus has based

his work, notes that the descendants of Abraham, by decree of God, were

to be more numerous than the stars in the sky. Any effort to count the

stars which were infinite would therefore be wasted. But in uniting Ara-

tus with Eudoxus, whose prose work was the model for the first half of

the _Phaenomena_, Augustine has complimented (perhaps unwittingly) the sci-

entific reputation of the poem and, thus, extended its fame. St. Jerome,

who lived in the fifth century A.D., furthermore, includes the appearance

of Aratus in his list of significant occasions in world history with the

words _Aratus agnoscitur_.[13] Such a reference to Aratus, one of the few

writers mentioned in the list, provides an important clue to the reputa-

tion of the _Phaenomena_ even among Christian Latin authors.

The pagan writer Macrobius in the early fifth century A.D. also demonstrates an appreciative awareness of Aratus' work. He notes in Saturnalia 5.2.4 that Vergil was influenced by Aratus' Phaenomena in writing the Georgics and he cites the first line of the Phaenomena as an authority for equating Jupiter and the sky in Saturnalia 1.18.13:

> mundus autem uocatur caelum, quod appellant
> Iouem. unde Aratus de caelo dicturus ait: ἐκ
> Διὸς ἀρχώμεσθα.

This reference to Aratus' poem in Macrobius' work is indicative of the pagan revival in force during the fifth century. Aratus' poem had appealed to erudite Hellenistic and earlier Roman critics and writers and, for similar reasons, learned Romans in the later imperial period considered the poem worthy of remembrance both for its own merits and for the inspiration it had afforded to great Roman writers like Cicero and Vergil.

Paulinus Nolanus, writing, like Macrobius, in the early fifth century A.D., however, offers a different interpretation of the Phaenomena in his Carmen 22.124-125:

> Nunc tria miremur texentem fata Platonem
> aut Arati numeros aut picta Manethonis astra?

The connection of Aratus with Manetho, the Egyptian astrologer, and with Plato, who expressed a belief in the divinity of the stars, indicates that Paulinus viewed the Phaenomena as an astrological work. Sidonius Apollinaris, a Christian familiar with Greek literature who wrote in the fifth century A.D., in contrast, describes an artistic representation of Aratus in Epistula 9.9.14. The poet is depicted with his head thrown back, while Zeno, the philosopher, is shown with furrowed brow:

> . . . neque te satis hoc aemulari quod
> per gymnasia pingantur Areopagitica uel pry-
> tanea curua ceruice Speusippus Aratus panda,
> Zenon fronte contracta . . .

In commenting on the artistic association of Aratus and the Stoic Zeno,
Sidonius emphasizes the traditional connection of Aratus with Stoicism.[14]
Yet another example of the inclusion of Aratus among philosophers is pro-
vided by Venantius Fortunatus, a Christian poet of the late sixth century
A.D., who names Aratus in his _Carmen_ 7.12.25 together with other learned
men:

> Archyta Pythagoras Aratus Cato Plato Chrysippus,
> turba Cleantharum stulta fauilla cubat.

In these lines Aratus is in the company of the philosophers Pythagoras,
Plato, Chrysippus and Cleanthes. Fortunatus' poem has as its subject
the inevitability of death for all men, great and small, and it bears the
message that only the Christian faith, not pagan philosophy, provides sal-
vation from death for mankind.

Finally, Gregory the Great expresses a similar statement of anti-
pagan sentiment in his _Moralia_ which were written in the sixth century
A.D. Gregory criticizes Aratus' poem (_Moralia in Iob_ 9.11):

> Nequaquam sermo ueritatis uanas Hesiodi,
> Arati et Callimachi fabulas sequitur, ut Arc-
> turum nominans, extremam stellarum septem cau-
> dam Vrsae suspicetur et quasi Orion gladium
> teneat amator insanus.

Gregory declares the poems of Hesiod, Aratus and Callimachus to be _uanae_
fabulae and thus rejects stellar mythology. The combination of Hesiod,
Aratus and Callimachus in this last testament to Aratus and his work,
however, is interesting, for the three were firmly linked, as mentioned
earlier, in Callimachus' comparison of Hesiod and Aratus in _Epigram_ 27.
The full significance of this association may not have been realized by
Gregory himself, but it is pleasantly ironic that the _testimonia_ for the
popularity of the _Phaenomena_ have returned full circle in Gregory's com-

ment to the earliest praise of Aratus' poem which was found among Hellenistic poets and critics.

In the face of such _testimonia_ it cannot be denied that Aratus' fame continued through the centuries and spanned both East and West, pagan and Christian. But modern scholars, puzzled by the long-lasting appeal of the work, have, in recent years, advanced various explanations for the popularity of the _Phaenomena_. Their solutions, however, we find, upon investigation to be unsatisfactory because they are limited in scope and because they are concerned mainly with the popularity of the _Phaeno-mena_ within the lifetime of Aratus himself.[15] In order to avoid this narrow approach, popularity will be viewed in the following discussion as representative not of the personal like or dislike of the poem by individual critics, but of the more important criteria of appeal, importance and dissemination. In other words, the word "popularity" will be taken to indicate the continuance of the reputation of the poem and its remembrance by generations subsequent to its first appearance in the third century B.C. "Popularity", so defined, cannot be limited to the Hellenistic age or even to the Roman Republic and the early Roman Empire. It must be examined according to the total range of _testimonia_ available, that is, from the Hellenistic age down to the end of the Middle Ages.

Scholars recently have advanced six different explanations for the appeal of the _Phaenomena_ in antiquity: astrology, astral religion, Stoicism, mythology, astronomy and literature.[16] All of these have some justification but other evidence calls into question their validity. Astrology and astral religion, for example, can be dismissed quickly because they are the least tenable explanations. According to one modern

opinion, the Phaenomena was subject to mutilation to serve the purposes of professional astrologers; they stripped away the prologue of the poem and the concluding weather signs and used the risings and settings of the constellations to do astrological calculations.[17] But while it is possible that those individuals who favored astrology may have seen in the Phaenomena a useful compendium of astrological theory, the use of the poem as a source for astrologers is largely unattested in antiquity and probably derived from the reference to Aratus together with the astrologer Manetho in Paulinus Nolanus' poem which was noted earlier.[18] In addition, it is important to note that, in antiquity, astronomy and astrology were barely distinguished from each other. The Latin words astronomia and astrologia were actually synonymous, as Cicero's De Divinatione 2.42.87 demonstrates:

> Ad Chaldaeorum monstra ueniamus; de quibus
> Eudoxus, Platonis auditor, in astrologia iudicio
> doctissimorum hominum facile princeps . . .

The term astrologia in this context must refer to astronomy and not to astrology since Eudoxus was an astronomer and in fact the writer whose prose work on the heavens Aratus adapted in his own astronomical poem.

Additional evidence suggests that the Phaenomena was not an astrological work. Astrology in the sense of the body of knowledge which presupposes the influence of celestial bodies on human beings cannot have existed in the Greek world before the Hellenistic period and in Greece such beliefs were only being formulated at the time when Aratus was writing his poem.[19] Furthermore, Aratus himself tells the reader that his daring fails at the prospect of discussing the planets when he writes in lines 460-461:

οὐδ' ἔτι θαρσαλέος κείνων ἐγώ. ἄρκιος εἴην
ἀπλανέων τά τε κύκλα τά τ' αἰθέρι σήματ' ἐνισπεῖν.

This omission, which may be compared with the lack of planetary informa-
tion in Manilius' Astronomica, makes the poem of no practical significance
for future astrologers since without the planets they could make no as-
trological predictions at all.[20] Finally, astrology cannot account suf-
ficiently for the long-lasting popularity of the Phaenomena because as-
trological ideas were largely censored in the West by the sixth century
A.D.[21]

A second untenable explanation for the popularity of the Phaeno-
mena, astral religion, is closely connected with, but not entirely de-
pendent on astrology. Astral religion may be defined as the belief that
the stars and planets are divinities. Again, it may be admitted that
devotees of this creed may have considered the Phaenomena with its order-
ly description of the constellations as a religious handbook of a sort,
but no ancient testimonia support the idea that the poem was viewed as
a work of astral religion by later generations.[22] In spite of the fact
that only the Greeks, among western peoples, practiced worship of the stars
and planets and considered that their orderly celestial movement was proof
of their rationality and wisdom,[23] Aratus' Phaenomena mentions only one
constellation, Virgo, or Dikē, to which divinity may be surely ascribed.
Since Aratus does not refer to the other constellations as divine beings,
it is difficult to build a case that the Phaenomena owes its popularity
to astral religion. In addition, as noted above, Aratus makes no mention
of the planets. According to theories of astral religion, the planets
which were simply "wandering stars" also deserved the worship of devoted
believers. Astral religion implies a belief that man, by contemplating

these beings and by living the intellectual, moral life which is con-

nected with this devotion, can purify himself and return to the heavens

which are his place of origin.[24]   Aratus, however, never instructs the

reader to commune with the heavens in the hope of purging himself. His

advice, on the contrary, is very practical, and at the end of his poem

he counsels (lines 1153-1154):

> Τῶν ἁμυδις πάντων ἐσκεμμένος, εἰς ἐνιαυτόν
> οὐδέποτε σχεδίως κεν επ' αἰθέρι τεκμήραιο.

Although his subject is celestial, Aratus' vision is ever directed

toward terrestial events.

Unlike astral religion, the third explanation for the popularity

of the Phaenomena, Stoicism, has many supporters among modern scholars.[25]

The ancient biographies remark that Aratus was a student of Zeno, the

founder of the Stoic school of philosophy and that Aratus wrote the poem

at the court of Antigonus Gonatas who was himself a Stoic sympathizer.[26]

Like Cleanthes, the successor to Zeno who wrote a hymn to Zeus, Aratus

invoked Zeus in the prologue to his own poem. And the weather signs which

constitute the final third of the poem seem to serve the purpose of amas-

sing evidence in support of the idea that all nature is active and alive

and representative of the power of this omnipotent god.[27]

Although such evidence at first suggests that Stoic content is

responsible for the popularity of the poem, closer investigation suggests

that Stoicism is an inadequate explanation for both the early and the la-

ter popularity of the work. First of all, the view that the popularity

of the Phaenomena is dependent on Stoic content seems to have its origin

in the four biographical sources for Aratus' life. No ancient testimonia

other than these Vitae specifically ascribe Stoicism to Aratus or his poem,

but the Stoics quickly claimed the _Phaenomena_ as one of their own clas-
sics. These biographies have a common source in a _Vita_ written one hun-
dred years after Aratus by the Stoic Boethus. In addition, Chrysippus of
Soli, Zeno Antipater and Archedemus of Tarsus, prominent Stoics, all came
from Cilicia which was, coincidentally, the birthplace of Aratus. It is,
therefore, justifiable to question whether Aratus' _Phaenomena_ was original-
ly and intentionally a Stoic work, or whether the Stoics rationalized the
poem into a Stoic work in the hope of being associated with the most nota-
ble poem of the Hellenistic age.

The reader, furthermore, will look in vain even for hints of Stoic
concepts or actual Stoic terminology in the poem itself.[28] The only parts
of the _Phaenomena_ which can be remotely connected with Stoicism are the
prologue and the concluding section on the weather signs, but surprisingly,
Stoic commentators felt that these two portions were not necessary to the
poem and as a result they removed them and only considered the intervening
portion of the poem from line 19 to line 732.[29] The praise of Zeus in a
prologue, in addition, is not a Stoic invention.[30] Aratus, in fact, fol-
lowed the didactic tradition established by Hesiod in the _Works and Days_
and both of their prologues highlight attributes of the same deity.[31] The
characteristics which the Stoics bestowed upon Zeus as they understood him
are evident in the Stoic Cleanthes' _Hymn to Zeus_, a work which has often,
and with only moderate justification, been compared with the prologue to
the _Phaenomena_.[32] Significant words from Cleanthes' hymn, such as ὁ λόγος
(line 12), ἡ ψυχή (line 34) and ὁ νόμος (line 39) are missing from Aratus'
prologue and indeed from his entire poem, and the concluding por-
tion of Cleanthes' invocation is totally different from that of the pro-

logue to the _Phaenomena_.[33] Aratus invokes the aid of Zeus and the Muses

in the composition of his poem, while Cleanthes prays for the guidance

of Zeus in daily life. General similarities in the choice of subject and

in the hymn-style of the prologues to the _Phaenomena_ and the _Hymn to Zeus_,

therefore, are inadequate criteria for equating Aratus' conception of Zeus

with that of Cleanthes, for Aratus in his poem has presented a complex

picture of Zeus which seems to have drawn its substance from the many as-

pects of the deity in Greek thought. His Zeus has greater affinity with

general pantheism than with specific Stoicism.[34]

The so-called Stoic content of the poem is also inadequate as an

explanation for the popularity of the _Phaenomena_ since the working life

of Aratus coincided closely with the formative years of the Stoic school.

These early years were spent in establishing fundamental doctrines and

during this time, the Stoics had to withstand great competition from other

philosophical schools. Within Stoicism itself, precepts were constantly

being developed, elaborated and corrected.[35] The biographies state that

Aratus learned Stoic doctrine at Athens from Zeno but it is not certain

that Aratus' so-called "Stoic view" was Zeno's since the number of sur-

viving works by the philosopher and his two immediate successors is la-

mentably small.[36]

Finally, even if Romans of the Republic and early Empire found the

Phaenomena with its reputation as a Stoic classic appealing, it is more

likely that Aratus' poem had a greater reputation, judging from the pre-

sence of the Latin translations and numerous _testimonia_, for its astro-

nomical content and literary merit. Furthermore, the supposed philosophi-

cal content of the poem could only have strongly influenced Roman readers

until the third century A.D., when Stoicism gradually faded from importance.[37] The fame of the _Phaenomena_ continues beyond this century both in the West and the East and consequently, Stoicism, which was not the philosophical position of the poem, cannot account satisfactorily for its popularity either at its first appearance or in late antiquity.[38]

The popularity of the _Phaenomena_ has also been attributed to the use of myth in the work. This explanation, however, largely misrepresents the content of Aratus' poem because, apart from the naming of the constellations which by nature have mythological associations, the poem has only four examples of extended myth-telling or catasterisms.[39] But mythology seems to have become significant in later ages when commentators and scholiasts alike found in Aratus' brief references to the constellations, areas which cried out for expansion and explication. Aratus' short description of the Pleiades in lines 261-263, for example, elicited further clarification in the hands of scholiasts who noted both the connection of the Pleiades with Orion and one of the Pleiades, Electra, with Troy.[40] More importantly, the references to constellations found in the _Phaenomena_ afforded great opportunities for imaginative interpretation on the part of the translators. Germanicus, for instance, expanded considerably the stellar information found in the _Phaenomena_ and Avienus added mythological material from various scholia to his translation.[41] In spite of the fact that the _Phaenomena_ was not initially intended as a mythological work, the Romans, translators as well as commentators, nonetheless found ample excuse to use the constellations as a basis for the creative handling of mythological tales.

A case can be made, however, for the astronomical content of

the poem as the reason for its popularity. The Phaenomena, considered

both as a simple handbook and a more technical astronomical work, which

possessed great scientific value as a work of descriptive astronomy, was

held in esteem by scientists of the ancient world.[42] Proof of such ap-

preciation may be found in the commentary to the poem by Hipparchus. This

astronomer, one of the greatest in the ancient world, believed that the

Phaenomena belonged in the domain of science, and he felt that it was his

duty to correct its scientific errors so that those who read the work for

its astronomical information would not be misled. In 1.1.8 of his com-

mentary he complimented Aratus on writing the Phaenomena unaided by an as-

tronomical background:

> Ἐμπειρότερον δὲ Εὔδοξος τὴν αὐτὴν τῷ Ἀράτῳ
> περὶ τῶν φαινομένων σύνταξιν ἀναγέγραφεν. εὐλόγως
> οὖν καὶ ἐκ τῆς τῶν τοσούτων καὶ τηλικούτων μαθη-
> ματικῶν συμφωνίας ἀξιόπιστος ἡ ποίησις αὐτοῦ δια-
> λαμβάνεται. καίτοι γε τοῦ Ἀράτου μὲν ἴσως οὐκ ἄξιον
> ἐφάπτεσθαι, κἂν ἕν τισι διαπίπτων τυγχάνῃ·

Hipparchus' criticism is objective and gives ample credit to the author

of the poem for his scientific undertaking.[43] Another source, the third

biography of Aratus, comments that the poem was taken seriously as an as-

tronomical work:

> βιάζονται δ' οὐ μετρίως. ἦν γὰρ καὶ τὸ εἰδέναι
> μεταφράσαι ἐμπειρίας μαθηματικῆς. εὑρήσομεν δὲ αὐτὸν
> καὶ ἐπιμελέστερον τὰ πλεῖστα τοῦ Εὐδόξου ἐπιστάμενον.

The biographer shows that Aratus was indeed knowledgeable of the astrono-

mical facts found in Eudoxus' prose version. In addition, at Rhodes,

learned people publicly discussed questions regarding Aratean astronomy,[44]

and Attalus, who seems to have written the first astronomical commentary

on the poem, hailed from this island where the study of astronomy flourished.

It is also worthy of note that in Hellenistic art, Homer symbolized

poetry while Aratus represented astronomy.[45] A Gallic mosaic from the

late Roman Empire which presents Aratus sitting with Urania the Muse of

astronomy exemplifies this association, and a similar motif can be found

on a silver skyphos from Berthouville and in mediaeval manuscript illus-

trations. Depictions of the poet in the guise of astronomer may also be

seen on Cilician coin types, in examples of Hellenistic royal portraiture

and in paintings.[46] A final piece of evidence from the Arabs, who were

keenly interested in Greek scientific works, emphasizes the later impor-

tance of the Phaenomena as a scientific work, for an Arabic translation

of the poem is known to have been made in the early ninth century A.D.

by the Jewish court astronomer, Abū Uthmān Sahl b.Bisr b.Habīb b.Hani.[47]

Knowledge of the existence of such a translation is a significant addi-

tion to the theory that the astronomical content of the poem was respon-

sible for its popularity.

Objections to the consideration of the Phaenomena as a work of

scientific value, however, are found even in antiquity. Cicero wrote

that Aratus, in his opinion, was not knowledgeable of astronomy (De Ora-

tore 1.16.69):

> etenim se constat inter doctos, hominem ignarum
> astrologiae, . . . Aratum de caelo stellisque dix-
> isse . . .

He repeats the same belief in De Republica 1.14.22. In addition, most late

testimonia do not indicate that the poem was seen as a scientific work

and, moreover, translations of scientific treatises from Greek to Latin

virtually ceased from the sixth to the twelfth century A.D. while the

understanding of Greek in the West also declined.[48] These later trends

in the Latin West limited the reputation of the Greek Phaenomena as a sci-

entific text.

Finally, the popularity of the Phaenomena in antiquity has been attributed to its literary value, an aspect of the poem which is usually overlooked by modern scholars in their rush to dismiss the Phaenomena as an inferior example of Greek poetry.[49] Such opinions, however, are not new because a similar judgment was made by Quintilian in Institutio Oratoria 10.155 where he dismisses the poem as unsuitable for the student of oratory:

> Arati materia motu caret, ut in qua nulla
> uarietas, nullus adfectus, nulla persona, nulla
> cuiusquam sit oratio; sufficit tamen operi, cui
> se parem credidit.

Quintilian's dislike of Aratus' poem is barely disguised here, but it is apparent that he has measured Aratus' work by the same oratorical values and literary criteria he had used to measure the works of Homer or Euripides. But such an appraisal does not do justice to Aratus' poem and is actually at odds with other ancient attitudes toward the work.[50]

Callimachus, whose laudatory epigram was presented at the beginning of the foregoing discussion of testimonia for the popularity of the Phaenomena, for example, praises Aratus' verses as λεπταὶ ῥήσιες, (subtle or refined discourses). The word λεπτός, a keyword of Callimachean criticism, signifies both a literary standard and a poetic ideal and Callimachus, therefore, can be said to have complimented the Phaenomena, with its elegance and modest length, as an exemplar of his own aesthetic theory.[51] Leonidas of Tarentum, who was also a contemporary of Aratus, praises the poem in words similar to those of Callimachus and his comments, preserved in Anthologia Palatina 9.25, provide further information about the distinction of Aratus' poem. In Leonidas' opinion, Aratus is second only

to the Zeus who placed the stars in the sky:

> Γράμμα τόδ' Ἀρήτοιο δαήμονος, ὅς ποτε λεπτῇ
>   φροντίδι δηναιοὺς ἀστέρας ἐφράσατο,
> ἀπλανέας τ' ἄμφω καὶ ἀλήμονας, οἷσιν ἐναργὴς
>   ἰλλόμενος κύκλοις οὐρανὸς ἐνδέται.
> αἰνείσθω δὲ καμὼν ἔργον μέγα καὶ Διὸς εἶναι
>   δεύτερος, ὅστις ἔθηκ' ἄστρα φαεινότερα.

The phrase λεπτῇ φροντίδι denotes the subtle, refined thought found in

Aratus' verses, while the word δαήμονος, (experienced or knowing), sig-

nifies the scholarly nature of the poet and also compliments him in the

spirit of Callimachean standards and criticism.[52]

Another favorable opinion about the literary merits of the Phae-

nomena comes from Ptolemy Euergetes who, writing in the late third cen-

tury B.C., praises Aratus over other poets who had written about the hea-

vens:[53]

> πάνθ' Ἡγησιάναξ τε καὶ Ἕρμιππος ⟨τὰ⟩ κατ' αἴθρην
>   τείρεα καὶ πολλοὶ ταῦτα τὰ φαινόμενα
> βίβλοις ἐγκατέθεντο †ἀπὸ σκοποῦ δ' ἀφάμαρτον†
>   ἀλλ' ὅ γε λεπτολόγος σκῆπτρον Ἄρατος ἔχει.

The use of the word λεπτολόγος, (speaking subtly), which is a combination

of the words λεπτός and λόγος, further demonstrates the influence that

Callimachus' high praise of the Phaenomena had on other critics and the

firm designation of the poem as an outstanding work of literature. Cicero,

like Ptolemy Euergetes, also says that Aratus demonstrated considerable po-

etic talent (De Republica 1.14.22):

> . . . cuius omnem ornatum et descriptionem sumptam
> ab Eudoxo multis annis . . . poetica quadam faculta-
> te uersibus Aratum extulisse.

The words poetica facultate represent the Callimachean keywords, λεπτός

and δαήμων, and serve as great praise from Cicero who was himself inter-

ested, as a poet and translator, in Greek literary norms.

While the entire poem has been described as λεπτός by the ancient critics, many individual passages, we find, are remarkable for the quality. The subtle use of word play can be found, for example, in a description of the constellation Aquila (lines 313-315):

... σχεδόθεν δέ οἱ ἄλλος ἄηται
(οὐ τόσσος μεγέθει, χαλεπός γε μὲν ἐξ ἁλὸς ἐλθών
νυκτὸς ἀπερχομένης), καί μιν καλέουσιν ᾿Αητόν.

In these verses, Aratus uses the verb ἄηται, (to toss about), to describe the motion of Aquila the Eagle, ᾿Αητόν. Subtle, but striking, imagery is also present in lines 294-299 where Aratus describes the sea when the sun moves into Capricorn:

ναύτηι μαλκιόωντι κακώτερον. ἀλλὰ καὶ ἔμπης
ἤδη πάντ᾽ ἐνιαυτὸν ὑπὸ στείρηισι θάλασσα
πορφύρει᾽ ἴκελοι δὲ κολυμβίσιν αἰθυίηισιν
πολλάκις ἐκ νηῶν πέλαγος περιπαπταίνοντες
ἤμεθ᾽ ἐπ᾽ αἰγιαλοὺς τετραμμένοι, οἱ δ᾽ ἔτι πόρσω
κλύζονται᾽ ὀλίγον δὲ διὰ ξύλον ᾿Αιδ᾽ ἐρύκει.

In these few lines Aratus paints a pathetic picture of mournful sailors sitting on ships and facing the safe but distant shore. In the poet's mind they are not unlike the diving birds of the sea, but cruel is their fate when they are swept overboard and saved from certain death by a mere plank of wood.[54]

The description of the poet as δαήμων, (knowing), can also be confirmed by the poem itself. In lines 541-544, for example, reference is made to a point of Euclidean geometry which states that each side of a hexagon inscribed in a circle equals the radius of the circle:

ὅσσον δ᾽ ὀφθαλμοῖο βολῆς ἀποτείνεται αὐγή,
ἑξάκις ἂν τόσση μιν ὑποδράμοι. αὐτὰρ ἑκάστη
ἴση μετρηθεῖσα δύω περιτέμνεται ἄστρα.
ζωιδίων δὲ ἓ κύκλον ἐπίκλησιν καλέουσιν.

In this case, the observer would be considered the center of the circle.[55]

In another instance, Aratus mentions the nineteen year cycle of the astronomer Meton (lines 752-753):[56]

γινώσκεıς τάδε καì σύ (τὰ γὰρ συναείδεται ἤδη
ἐννεακαίδεκα κύκλα φαεινοῦ ἠελίοιο).

This passage, therefore, gives the poem a learned air and adds to the reputation of the work as one which demonstrated astronomical knowledge in the midst of its elegant verses.

Nevertheless, the notable literary merits of the poem do not account sufficiently for the popularity of the poem down through the Middle Ages. Ancient testimonia provide no specific references to the literary value of the poem beyond the younger Pliny's observation on the absence of superfluous elements in the work (Epistula 5.6.43):

. . . modum tamen seruat.
Non enim excursus hic eius sed opus ipsum est.

And while the translation of Avienus demonstrates indirectly an appreciation of the literary worth of the poem, the late prose translation, Aratus Latinus, shows no awareness of the literary merits of the poem and renders none of the subtleties or refinements of the Greek original. Its presence suggests that the ability of later generations to appreciate the Greek poem as literature declined considerably after the pagan revival of the fourth and fifth centuries A.D.

Each of the foregoing explanations for the popularity of the Phaenomena is, therefore, limited in some way. Astrology and astral religion are wholly unsatisfactory and Stoicism has proven to be a reasonable explanation for the popularity of the poem in the late Roman Republic and early Empire, but not for its initial or later popularity. Mythology seems to have been more appealing to the Roman translators and to later

commentators than to Aratus himself, while astronomy and literature,

united by the fact that the Phaenomena is an astronomical poem, are both

more appropriate as explanations for the early popularity of the poem

than for its later popularity. Without excluding the partial claims of

these explanations, it is possible to advance another solution, which seems

to have been overlooked in attempts to determine the reasons for the popu-

larity of the poem, that the Phaenomena owes its long-lasting reputation

to its use in antiquity as a school text.

No fewer than ten modern scholars claim that Aratus' Phaenomena

was used as a school text in antiquity and the Middle Ages, but none of

them ties this fact to the popularity of the work or discusses the impli-

cations of the statement.[57] Their remarks are supported by the declara-

tion of Nicephorus Blemmydes a Byzantine monk of the thirteenth century,

which is the only piece of evidence that specifically attests to the use

of the Phaenomena in schools.[58] But we may infer that the work was em-

ployed as an instructional text because it was a didactic or "teaching"

poem and, as such, it would have been a possible choice for the classroom.[59]

In addition, a large number of commentaries on the work, written for the

purpose of explaining and correcting points in the poem, would have also

proven genuinely useful as aids for the teacher who employed the Phaeno-

mena for instructional purposes.[60] Manuscripts of the poem are often

found with these commentaries or introductions and Vitae attached and each

of these additions would aid the student or teacher in study of the work.[61]

The scientific aspect of the poem, in particular, might have at-

tracted attention in schools. Introductory study of astronomy was not by

means of technical manuals, but by means of basic texts, like the Phaeno-

mena, which could be easily committed to memory.[62] Cicero, who was in-
terested in the education of both his son and his nephew, wrote in De
Oratore 1.41.187 that mathematics and astronomy were important to one's
education. Vitruvius in De Architectura 9.1.16 mentions that he learned
astronomy a praeceptoribus, that is, from teachers; and, in addition, he
considered astronomical study to be part of the liberal arts curriculum.[63]
Quintilian, whose criticisms of the Phaenomena were mentioned above, ad-
mitted nonetheless in Institutio Oratoria 1.4.4 that the study of astro-
nomy was necessary for the understanding of poetry.

From a literary standpoint, however, Quintilian's disapproval of
Aratus' poem for the purposes of rhetorical instruction suggests that the
Phaenomena was being used for teaching in schools -- without good effect
in his opinion. The fact that Cicero, Vergil and Ovid employed Aratus'
poem in their earliest and formative works suggests further that all three
were introduced to the Phaenomena in the schoolroom where poetry was used
for instruction.[64] Cicero's translation of the first portion of Aratus'
Phaenomena was made before he reached the age of twenty, perhaps around
89 B.C., as the phrase admodum adulescentulo (De Natura Deorum 2.41.104)
indicates.[65] Vergil's Eclogues may also be dated to his early years as
a poet and the allusion to the prooemium of Aratus' poem in Eclogue 3.60-
61 may possibly have its origin in the classroom.[66] Since the third Eclogue
was written between the years 42 B.C. and 38 B.C., Vergil, too, must have
been only in his twenties. Ovid, in addition, exhibited a familiarity
with Aratus' poem in the Amores, which he began to write when he was eight-
een years old and both he and Gordian are said to have made translations
of the Phaenomena itself. Since these were derivative works, it is tempt-

ing on analogy with Cicero to associate them with their formative years

although this cannot be proven for Ovid.[67]

Evidence, moreover, that the Phaenomena may have been used in the

instruction of astronomy in schools in the East can be adduced from the

definitive statement of Nicephorus Blemmydes and from the surviving work

by Leontius, a Byzantine engineer who wrote in the seventh century on

the construction of Aratean spheres. These spheres were most likely used

as mechanical teaching devices for the exposition of the Phaenomena and,

therefore, they would have found a ready place in the schools.[68] In the

West, however, concrete evidence is lacking, and perhaps lost, because

testimony for bilingualism in the late Roman and early Mediaeval period is

very fragmentary.[69] Pierre Courcelle has demonstrated conclusively that

in the fifth century A.D. Greek literary culture was unknown in Spain,

Britain and Ireland, that in the sixth century literary culture disap-

peared from Gaul and Africa and that it disappeared from Italy at the end

of the sixth century.[70] He also argues that Augustine, Jerome, Venantius

Fortunatus and Gregory the Great did not know Greek well enough to read a

scientific work like the Phaenomena; indeed, they may not have known the

language at all.[71] Since these authors were mentioned earlier in this

chapter because of their knowledge of the Phaenomena, it seems reasonable

to deduce that they either knew Aratus' poem second-hand from other Lat-

in works, or more likely, through the translations of the work which were

accessible to them. Courcelle points out that Augustine, for example,

was familiar with Aratus and Eudoxus through Cicero's translation of the

Phaenomena,[72] and testimonia show that in the ninth century, Lupus of

Ferrières wrote to the monk Ansbald at Prüm (Epistula 69) asking to bor-

row his copy of Cicero's work in order to correct his own manuscript. The translations of the Phaenomena have come, by this time, into a prominence of their own.

The lack of Greek learning in the West and the evidence that the Phaenomena was used as a school text leads one to conjecture, therefore, that it was the translations of the poem which were used later as school texts in place of the Greek original. The translation of Germanicus, in particular, seems to have had some success as a school text, because it also attracted the composition of scholia.[73] Germanicus' translation may also have been considered a more accurate school text since in it the author corrected factual errors in the Phaenomena while retaining the basic order and substance of the Greek poem.[74] In addition, the word-for-word interlinear prose translation, Aratus Latinus, is found with relevant scholia interspersed in order to facilitate the understanding of both the Latin translation and the Greek original. The Aratus Latinus itself may have been used as a school text since in its text-translation-commentary form it would have proven most useful for instructional purposes. For these reasons, perhaps, references to the employment of the Greek Phaenomena as a school text in the West are lacking, while tantalizing glimpses of the actual reading of the Latin translations in late antiquity and the Middle Ages are present.

Other manuscripts indicate a further trend in the educational history of Aratus' Phaenomena. Epitomes of the work, such as the De Astrologia Arati, were made and these abbreviated versions may also have seen use as school texts.[75] The library catalogue of Monasterium Augiense or Reichenau contains, for example, a group of works under the title of De

Opusculis Boetii, which may be dated to the ninth century. Among the
works included are De Arithmetica, De Geometria, De Dialectica et Rhe-
torica Alcuini, Arati De Astrologia Liber I and Bedae De Temporibus Maior
Liber. Although caution must be applied when dealing with modern compi-
lations of mediaeval library catalogues, the presence of Bede's Liber De
Temporibus, which seems to have been a textbook for the instruction of
chronology and numerology,[76] together with the Arati De Astrologia, an
epitome or simplified prose version of the Phaenomena, and other texts
of an elementary nature allows the conjecture that the Arati De Astrologia
was itself elementary and perhaps used as a school text.

By comparison, Codex 250, which is found in the collection of
manuscripts in the library of St. Gall, can be dated to the ninth century
A.D. This manuscript includes, among other items, Bede's De Temporibus and a
mediaeval epitome of the Phaenomena; since Bede's De Temporibus has been
identified as a textbook, it is again possible to ascribe educational
value to the epitome of Aratus' work. From the same library, Codex 902,
which may be dated to the tenth or the eleventh century A.D., contains
examples of Greek and Latin declensions and conjugations and a work begin-
ning with the words "incipit Computus Graecorum".[77] These works are also
of an elementary, educational nature, and the inclusion of an epitome of
the Phaenomena in their midst further strengthens the hypothesis that the
popularity of the Phaenomena continued because of its long use as a school
text, first in its original Greek form and later in the form of Latin trans-
lations and epitomes.

In the East, the employment of the Phaenomena as a school text may
be dated with certainty through Nicephorus Blemmydes to the thirteenth

century. In the West, the poem may have been used as a school text so

long as students could read Greek, but when this ability ceased, perhaps

by the sixth century A.D., teachers may have been forced to turn to

the Latin translations or to epitomized Latin versions of the work.[78]

In the thirteenth century, finally, a series of elementary texts based

on three astronomical works by Johanes de Sacrobosco came into use for the

study of astronomy at the universities. With the publication of the edi-

tio princeps of the Phaenomena in 1499, the practical value of the poem

and its popularity as an instructional text came to an end.[79]

In conclusion, the Phaenomena of Aratus derived its initial popu-

larity from its nature as a learned didactic rendering of the prose work

of Eudoxus. Early acclaim was accorded the work because of its scientific

exposition and because of its literary merits, and for these reasons the

poem came to be viewed as a work of astrology, astral religion, Stoicism,

mythology, science and literature. Attempts to ascribe limited popularity

to the poem on the basis of these six reasons led only to partial solu-

tions, but a new hypothesis -- that the Phaenomena owes its reputation

to its continuing use as a school text -- seems to account best for both

the early and later popularity of the poem, while bringing a new impor-

tance to the Latin translations and epitomes. The Phaenomena, praised

by Greek scientists, Hellenistic critics and Roman writers, found an ac-

cepted place in the school room as an object of study by generations of

school children. Without such usage, which Horace found so odious and

horrifying a prospect for his own works, the Phaenomena may well have

lost its appeal long before the revival of science during the Renaissance.

NOTES

[1]Compare H.I. Marrou, Histoire de l' éducation dans l'antiquité
(Paris: Editions du seuil, 1948), p. 277, and D.A. Kidd, "The Fame of
Aratus", AUMLA, 15 (1961), p. 7.

[2]J. Martin, Histoire du texte des Phénomènes d'Aratos (Paris:
Librairie C. Klincksieck, 1956), p. 19.

[3]Fragments of Attalus' commentary may be found in E. Maass, ed.,
Commentariorum in Aratum Reliquiae (Berlin: Weidmann, 1898, repr.
1958), pp. 1-24. For the opinion of Hipparchus on Attalus' Aratean
commentary see Hipparchus' commentary to the Phaenomena 1.1.3-5.
Fragments of Achilles' commentary may be found in Maass, Commentariorum,
pp. 76-85.

[4]Fragments of these anonymous commentaries may be found in Maass,
Commentariorum.

[5]Achilles' introduction may be found in Maass, Commentariorum,
pp. 25-75. Scholia have been collected recently by J. Martin, ed.,
Scholia in Aratum Vetera (Stuttgart: Teubner, 1974), pp. 37-527.

[6]Quintilian (Institutio Oratoria 10.187) comments on the literary
activities of Varro Atacinus. The fragment of his translation of the
Phaenomena may be found in W. Morel, ed., Fragmenta Poetarum Latinorum
Epicorum et Lyricorum Praeter Ennium et Lucilium (Leipzig: Teubner,
1927), p. 99. Some controversy surrounds the identification of this
fragment as a translation of Aratus' Prognostica portion, for it is known
as Epimenis or Epimenides. It seems, however, to be a translation of
lines 942ff. The fragment of Ovid's translation may be found in Morel,
pp. 112-113. The author of "Gordiani Tres" (Scriptores Historiae Augus-
tae 3.2) describes Gordian's literary endeavors. Gordian seems to have
followed Cicero's path quite closely. The words adulescens cum esset
Gordianus may be compared with Cicero's own admodum adulescentulus (De
Natura Deorum 2.41.104). St. Jerome states that the list of translators
of Aratus' poem is too long to enumerate in Commentarius in Epistula ad
Titum 1.12, cited in V. Buescu, ed., Cicéron: Aratea (Hildesheim: Georg
Olms Verlagsbuchhandlung, 1941, repr. 1966), pp. 20-21.

[7]The translated portions in Vergil's first Georgic may be com-
pared with their corresponding passages from the Phaenomena:

Georgic 1.	Phaenomena
438-447	819ff.
458-465	855ff.
356-359	909-912
360-364⟩	
368-369⟩	913-923

Georgic 1. 377-378	Phaenomena 942-953
379-380 ⎫ 381-389 ⎭	954-972
351-355	733-739
427-437	778-818
365-367 ⎫ 370-374 ⎭	924-941
390-392	973-987
401	988-993
393-394 ⎫ 402-403 ⎭	994-1012
395-397	1013-1020
410-414	1021-1043
374-375	1064-1081
423	1104ff.
399-400	1122ff.

Georgic 1.398-399, 404-409 and 415-422 have no equivalents in the Phaenomena. Compare the discussion of corresponding passages from the two poems in G.L. Beede, "Vergil and Aratus: A Study in the Art of Translation" (Ph.D. dissertation, University of Chicago, 1938). G. Sarton, A History of Science (Cambridge, Mass.: Harvard University Press, 1952), II, 325 notes that Julius Caesar composed a work entitled De Astris which also continued the tradition of the Prognostica of Aratus.

[8]Callimachus' affinity for Hesiod is expressed in Aitia 1. fr. 2 and Aitia 4.fr. 112. According to H.N. Porter, "Hesiod and Aratus", TAPhA, 77 (1946), p. 158 Callimachus alludes in Epigram 27 to the similar metrical approach of Hesiod and Aratus. E.G. O'Neill, Jr., "The Localisation of Metrical Word-types in the Greek Hexameter: Homer, Hesiod and the Alexandrians", YClS, 8 (1942), p. 132 determined, however, that Aratus resembled metrically, not Hesiod, but Callimachus. Porter, p. 168 reinterprets O'Neill's data and decides that Hesiod and Aratus are basically similar in their metrical approach. Compare H. Reinsch-Werner, Callimachus Hesiodicus: Die Rezeption der hesiodischen Dichtung durch Kallimachos von Kyrene (Berlin: Verlag Nikolaus Mielke, 1976), p. 14. Callimachus favored Hesiod over Homer, according to Reinsch-Werner.

[9]Callimachus and Leonidas of Tarentum are the only contemporary authors to mention Aratus of Soli. A.S.F. Gow, ed., Theocritus (Cambridge: Cambridge University Press, 1950), II, 119 n. 5 states that Apollonius Rhodius is generally held to have known Aratus' poem. There is some controversy over whether Theocritus knew Aratus. A.T. Murray, "Aratus and Theocritus", TAPhA, 36 (1905), p. lxv notes that the "Aratus" mentioned in Idyll 7 of Theocritus is identical with Aratus, author of the Phaenomena. U. von Wilamowitz-Moellendorf, "Aratos von Kos" in his Kleine Schriften (Berlin: Akademie-Verlag, 1894, repr. 1971), II, 71 states, however, that the "Aratus" of Theocritus' poem is not Aratus of Soli. Gow, II, 119 believes that this "Aratus" cannot be the poet from Soli since neither poet seems to show any familiarity with the other. The evidence of Theocritus' interest in

astronomy is no clue since educated people at that time had a general in-
terest in the subject. G. Knaack, "Aratos, der Dichter aus Soloi in
Kilikion", RE (1896), II, 392 also comments on the confusion of these
men with the name of "Aratus". G.R. Mair, ed., Aratus (Cambridge,
Mass.: Harvard University Press, 1955, repr. 1977), p. 188 adds against
the identification that the name "Aratus", common on Cos, occurs on coins
and in inscriptions of the period.

[10]W. Clausen, "Callimachus and Latin Poetry", GRBS, 5 (1964),
pp. 187-188.

[11]Compare also Catullus' Carmen 1.1-2. A discussion of Latin
translations of the Greek word λεπτός may be found in E. Reitzenstein,
"Zur Stiltheorie des Kallimachos", in E. Reitzenstein, ed., Festschrift
R. Reitzenstein (Leipzig and Berlin: Teubner, 1931), pp. 34-36. Words
which were commonly used as translations were tenuis and gracilis. For
the word tenuis, compare Vergil's Eclogue 1.2 and see Clausen, p. 194.

[12]D.P. Kubiak, "The Orion Episode of Cicero's Aratea", CJ, 77
(1981), p. 21 comments that Cicero's translation was neither neoteric
nor pre-neoteric, for it demonstrates no understanding or use of Cal-
limachean aesthetic criteria. Elsewhere, however, in a summary of his
dissertation, "Cicero, Catullus, and the Art of Neoteric Translation", in
HSClPh, 84 (1980), p. 337 he notes "what may be termed the 'proto-
neoteric' qualities of Cicero's Aratea".

[13]The Monumenta Germaniae Historica provide examples of four
Chronica in addition to that of St. Jerome which use the phrase Aratus
agnoscitur; their authors are Isidore Iunior (Vol.XI, p.450), Prosperus Tiro
(Vol.IX, p.399), the Venerable Bede (Vol. XIII, p. 276). Agnoscitur is used
regularly by all authors in reference to Aratus, but rarely for other
writers in the lists. Isidore in his Chronica uses agnoscitur for both
Herodotus and Demosthenes, while Bede in his Chronica uses agnoscitur
for Zeuxis the artist. For Jerome, see Vol. IX, p. 637.

[14]F. Imhoof-Blumer, "Coin types of Some Cilician Cities", JHS,
18 (1898), p. 167 presents evidence that Aratus was honored on coins
of his native province. Example no. 20 (Plate XII, fig. 17) is a coin
depicting the bust of the Stoic Chrysippus wearing a cloak and touching
his beard with his left hand on the obverse. On the reverse is a figure
of Aratus wearing a cloak and looking upward. The identifications are
those of Imhoof-Blumer. K. Schefold, Die Bildnisse der antiken Dichter,
Redner und Denker (Basel: Benno Schwabe, 1943), p. 173, no. 28, however,
identifies the bearded figure as Aratus and the figure on the reverse as
Chrysippus. For the association of Aratus with a Stoic philosopher,
compare also St. Paul's tacit endorsement of Aratus and Cleanthes in Acts
17.28: ὡς καὶ τινὲς τῶν καθ' ὑμᾶς ποιητῶν εἰρήκασιν "τοῦ γὰρ καὶ γένος
ἐσμέν", which alludes to line 5 of the Phaenomena and line 4 of Cleanthes'
Hymn to Zeus.

[15]W. Sale, "The Popularity of Aratus", CJ, 61 (1966), p. 160 mentions that the Phaenomena was popular at least until the fourth century A.D., but he never substantiates his claim or discusses its implications. Kidd, p. 18 makes a vague reference to the lasting reputation of the Phaenomena, but like Sale, he does not consider the point to any great extent in his discussion.

[16]Navigation has also been proposed as an explanation for the popularity of the poem. See A. Rey, La jeunesse de la science grecque (Paris: La Renaissance du Livre, 1933), pp. 407-408 and J.B. Bury, "The Hellenistic Age and the History of Civilization" in The Hellenistic Age (New York: Norton, 1923), p. 5.

[17]Sale, p. 160. Compare J. Lindsay, Origins of Astrology (London: Frederick Muller, 1971), p. 68.

[18]H. de la Ville de Mirmont, "L'astrologie chez Gallo-Romains", REA, 5 (1903), p. 288 comments that Paulinus Nolanus' astrological reference Arati numeros denotes the Διοσημεῖαι portion of Aratus' poem, but this is hardly likely. F. Boll, Sphaera: Neue griechische Texte und Untersuchungen zur Geschichte der Sternbilder (Hildesheim: Georg Olms Verlagsbuchhandlung, 1903, repr. 1967), p. 396 states that Aratus had no knowledge of astrological calculations. T.B.L. Webster, Hellenistic Poetry and Art (London: Methuen, 1964), p. 32 and A. Körte, Hellenistic Poetry, trans. J. Hammer and M. Hadas (New York: Columbia University Press, 1929), p. 256 agree with this statement.

[19]Martin, Histoire, p. 18 comments that astrology came into the Greek world at nearly the same time as the Phaenomena. F. Cumont, Astrology and Religion Among the Greeks and Romans, trans. J.B. Baker (New York: Dover Publications, 1912, repr. 1960), p. 30 notes the absence of astrology in Greece from the sixth to the fourth century B.C. D. Pingree, "Astrology", Dictionary of the History of Ideas (1968), I, 118 writes that astrology or the study of the impact of the celestial bodies whose influence is considered to be absolutely determinative of all motions in the sublunar sphere cannot have existed before the Hellenistic period.

[20]A. Bouché-Leclercq, L'astrologie grecque (Paris: Ernest Leroux, 1899), p. 308 comments on the importance of the planets in astrology: "Les planètes sont les véritables Moeres de l'astrologie, les fileuse de la destinée. C'est la liste de leurs modes d'action que l'astrologue doit toujours avoir présente à l'ésprit". G.P. Goold, ed., Manilius: Astronomica (Cambridge, Mass.: Harvard University Press, 1977), pp. xcvii-xcviii comments that after a discussion of paranatellonta in 5.32-709, Manilius must have dealt with planetary influences. But a lacuna of only 140 lines or so seems "ridiculously insufficient to treat of planetary influences in astrology". Manilius, therefore, seems to have avoided a discussion of planets and their influence.

[21]R. Bonnaud, "Note sur l'astrologie latine au VIe siècle", RBPh, 10 (1931), p. 570.

[22]Sarton, II, 63 writes that the study of the stars was theology and religion. In his opinion, "the book of religion, the eternal Bible was opened every night in the sky to everybody who cared to read it". This modern viewpoint, however, does not accurately describe the content of the Phaenomena.

[23]Cumont, Astrology and Religion, p. 58, 89. Compare P. Boyancé, "La religion astrale de Platon à Cicéron", REG, 65 (1952), p. 318 and M.P. Nilsson, "The Origin of the Belief Among the Greeks in the Divinity of the Heavenly Bodies", HThR, 33 (1940), pp. 7-8.

[24]Boyancé, pp. 312-313. This is a definition of Cumont's "mysticisme astral". Compare Cumont, Astrology and Religion, p. 84.

[25]Compare among others, M. Erren, Die Phainomena des Aratos von Soloi: Untersuchungen zum Sach-und Sinnverstandnis (Wiesbaden: Franz Steiner Verlag, 1967), pp. 21-24; W. Ludwig, "Die Phainomena Arats als hellenistische Dichtung", Hermes, 91 (1963), p. 429; W.W. Tarn, Antigonus Gonatas (Oxford: Clarendon Press, 1913), p. 228.

[26]Tarn, pp. 225-226 remarks that Antigonus stood with the Stoics and to a Stoic, science had no meaning at all. This is a puzzling statement in view of the fact that Antigonus commissioned a scientific poem. The symbol of the starburst depicted on Macedonian coins, which is connected with the royal house, seems to indicate an interest in astronomical matters or at least an awareness of the power of astronomical iconography for propaganda. Aratus' poem, with its stellar subject, appears to be a commentary on and compliment to the royal house which was symbolized by the starburst. The invocation to Zeus and the emphasis on Zeus throughout the poem (See Chapter VIII) are highly significant. The coinage of Philip II, which started the long-lasting Macedonian tradition of depicting Zeus on the obverses, proclaims the common ancestry of the Macedonians and their brotherhood with the Greeks. Since the royal family claimed descent from Heracles, son of Zeus, Aratus' emphasis on Zeus in his poem may be a subtle encomiastic tribute to an illustrious lineage of his host Antigonus Gonatas and not a reference to his philosophical outlook. See also N.G.L. Hammond and G.T. Griffith, A History of Macedonia (Oxford: Clarendon Press, 1979), pp. 665-667.

[27]Sale, pp. 161-162. This view may be compared with the idea that the wisdom and goodness of God not science moved Aratus to write the Phaenomena expressed by U. von Wilamowitz-Moellendorf, "Die Locke der Berenike" in his Reden und Vorträge (Berlin: Weidmann, 1925), I, 202.

[28]Technical Stoic terminology is lacking in the Phaenomena. The word λόγos, for example, is only used in the sense of story as in line 163 of the poem. The word πνεῦμα means only "wind", as in lines 784-785. Stoic concepts are also lacking. The idea of the wise man, σοφόs or σπουδαίων, which is expressed in various testimonia collected in J. von Arnim, ed., Stoicorum Veterum Fragmenta (Leipzig: Teubner, 1921), I, 146-164 is absent and the tale of the man who grouped the various stars into constellations in lines 373-381 is not the tale of a Stoic sage,

but that of an early astronomer.

[29]Martin, _Histoire_, p. 19. In this regard, only the translation of Germanicus could be regarded as a Stoic poem, because Germanicus removed the Aratean prologue and the concluding weather signs and substituted an invocation to Augustus and an explanation of astrological prognostics in their place.

[30]Surviving invocations to Zeus share many features with Aratus' prologue. Like _Phaenomena_ 15, for example, Hesiod's _Works and Days_ 2, Callimachus' _Hymn to Zeus_ 94 and Cleanthes' _Hymn to Zeus_ 34 address Zeus as πάτερ. For other similarities of ancient religious convention see A.W. James, "The Zeus Hymns of Cleanthes and Aratus", _Antichthon_, 6 (1972), p. 35.

[31]For the attributes of Zeus as expressed by Hesiod and Aratus see H. Lloyd-Jones, _The Justice of Zeus_ (Berkeley: University of California Press, 1971), pp. 33, 85-86.

[32]G. Pasquali, "Das Proömium des Arat" in _Charites: Friedrich Leo zum sechzigsten Geburtstag_ (Berlin: Weidmann, 1911), p. 119 comments that the _Phaenomena_ of Aratus is dependent both on Hesiod's poems and on Stoic theory.

[33]Compare James, pp. 32-33. Webster, p. 36 holds that Cleanthes' _Hymn to Zeus_ is later than Aratus' _Phaenomena_. Körte, p. 250 believes that Aratus used Cleanthes' hymn for a model and James, p. 28 writes that the problem of the chronology of the two works is insoluble.

[34]Compare F. Susemihl, "Zur Alexandrinischen Literaturgeschichte: Arat und die Stoiker", _NJPhP_, 40 (1894), p. 99 and James, p. 31.

[35]D.E. Hahm, _The Origins of Stoic Cosmology_ (Columbus: Ohio State University Press, 1977), p. xvi.

[36]Diogenes Laertes (Book 7) does not mention any connection of Zeno and Aratus. In 9.113 Aratus is mentioned in connection with Timon of Phlius of whom he asks advice about reliable texts of Homer.

[37]J. Soubiran, ed., _Aviénus: Les Phénomènes d'Aratos_ (Paris: Les Belles Lettres, 1981), p. 44 states that the invocation to Zeus found in Aratus' _Phaenomena_ is an expression of Stoic belief and that the translation of Avienus expresses this Stoic pantheism in its own prologue, especially in lines 5-21. Avienus' "Stoic belief", however, may be a form of antiquarianism, for which see Chapter VIII, n. 36.

[38]See James, p. 28 and E.A. Barber, "Alexandrian Literature", in _The Hellenistic Age_, no ed. (New York: Norton, 1970), p. 44.

[39]These four constellations are the Bears, Virgo, Pegasus and Orion. Sale makes some misleading statements about the _Phaenomena_ as

a work of mythological exposition. On p. 162 he comments that catas-
terisms must have been "great fun for the knowledgeable reader". On
pp. 163-164 he argues that mythology accounts best for the popularity of
the poem, since the presence of constellation myths causes men who live
in sophisticated times to long for an ideal, more naive time when primi-
tive beliefs reigned. This opinion of the poetic vision of the poem
is unsubstantiated and, perhaps, does the poem an injustice.

[40]See, for example, C. Robert, ed., Eratosthenis Catasterismorum
Reliquiae (Berlin: Weidmann, 1878, repr. 1963), pp. 134-137. Scholia to the
poems of Aratus and Germanicus and the comments of Hyginus are presented
together.

[41]G. Sieg, "De Cicerone Germanico Avieno Arati Interpretibus"
(Dissertatio Inauguralis, Halle, 1886), p. 24 notes that Germanicus
used the fables of Eratosthenes while (pp. 38-39) Avienus used scholia
for his expansions. Compare Soubiran, Aviénus, pp. 53-54.

[42]W.H. Stahl, Roman Science: Origins, Development and Influence
to the Later Middle Ages (Westport, Conn.: Greenwood Press, 1962),
p. 37 writes that "Aratus gave readers the exquisite pleasure of seeming
to be grasping a scientific discipline in a delectable poem". This ful-
some statement is somewhat untrue to the nature of the poem. O. Neuge-
bauer in a review of Stahl's book in AJPh, 85 (1964), p. 418 criticizes
Stahl's excessive use of the word "handbook". Compare Sale, p. 162
who expresses a view similar to that held by Stahl.

[43]Compare Preface, n. 9.

[44]Martin, Histoire, p. 23.

[45]Marrou, Histoire, p. 277.

[46]Maass, Commentariorum, p. 173 provides a picture of the Gallic
mosaic from Trier which is damaged on the right side near the figure of
Urania. The silver skyphos is mentioned by Marrou, Histoire, p. 570, n. 12.
Schefold, pp. 47, 216 discusses the Hellenistic cup depicting Aratus lean-
ing over a globe. Maass, pp. 172, 174 depict manuscript illustrations.
Discussion may be found in E. Bethe, "Aratillustrationen", RhM, 48 (1893),
pp. 91-109. Bethe traces mediaeval manuscript illustrations of Aratus
to a Hellenistic prototype. An example of a portrait which may be that
of Aratus can be found in A.J.B. Wace, "Hellenistic Royal Portraits",
JHS, 25 (1905), p. 89. The bust is commonly attributed to Attalus I,
but Wace remarks that the head bears little resemblance to coin portraits
of Attalus. His conjecture is that it is a portrait by a Greek artist
in the first century B.C. of a Roman general. The portrait, as depicted
in Plate 9.2, however, resembles other references to portraits of Aratus,
since the gaze of the subject is directed upwards. Compare Sidonius
Apollinaris, Epistula 9.9.14 and Pomponius Mela, Chorographia 1.71 who
makes reference to a statue which was erected to Aratus by his native
city. For a thorough investigation of the depictions of Aratus in antiquity

see G.M.A. Richter, The Portraits of the Greeks (London: Phaidon Press, 1965), pp. 239-241. Compare also n. 14.

[47]E. Honigmann, "The Arabic Translation of Aratus' Phaenomena", Isis, 41 (1950), p. 31.

[48]D.C. Lindberg, "The Transmission of Greek and Arabic Learning to the West", in D.C. Lindberg, ed., Science in the Middle Ages (Chicago: University of Chicago Press, 1978), p. 70. A few mediaeval translations from Ravenna and the Aratus Latinus are exceptions to this claim.

[49]Kidd, p. 9 argues strongly for the continued popularity of the Phaenomena on the basis of its literary merits. Compare the rather scathing criticism of G. Williams, Tradition and Originality in Roman Poetry (Oxford: Clarendon Press, 1968), p. 255:

> The Greek work is an exhaustively detailed
> descriptive analysis of astronomical geography,
> mythology, and meteorology . . . it very rarely
> catches fire. Occasionally a fine picture is
> briefly held -- of cranes in winter or the solitary
> wolf or the sea in storm -- but the poet is hastening
> on to the next piece of dubious information.

Williams seems to be following the lead of Quintilian in criticizing the Phaenomena. Sale, p. 160 considers the poem to be a second-rate work, while J. Irigoin, like Kidd, states in a review of Martin's Histoire du texte des Phénomènes d'Aratos, RPh, 31 (1957), p. 302 that the popularity of the work at least to the first century A.D. was due to the beauty of its verses.

[50]Quintilian (Institutio Oratoria 10.1.52) is only slightly more favorable toward Hesiod whose works bear resemblance to the Phaenomena. In 10.146, however, Quintilian praises Homer and in 10.1.68 he praises Euripides.

[51]See Reitzenstein pp. 25-40 for a discussion of λεπτός as an indication of style in the Hellenistic opinion. Compare also Callimachus, Aitia 1.fr. 1.24. Another theory is held by J.E. Jacques who comments in "Sur un acrostiche d'Aratos (Phén. 783-87)", REA, 62 (1960), p. 59 that Aratus' poem is not really an example of the καταλέπτον style. Jacques notes the presence of the λεπτή acrostic in lines 783-787 where λεπτή is spelled out by the first letter of each following line. In his opinion, the acrostic is a key to understanding Callimachus' reference to λεπταὶ ρήσιες which is found in Epigram 27. Aratus, it seems, praised Callimachean aesthetics by means of his acrostic and Callimachus acknowledged this reference and paid a discreet compliment to Aratus in one of his own poems. In spite of this argument, however, the status of Aratus' poem as an exemplar of Callimachean aesthetic theory cannot be easily dismissed. The deliberate nature of the Aratean acrostic is further supported by the appearance of an acrostic in Vergil's translation of these lines (Georgic 1.424-437. The initial words of three verses, maximus, uentus and pura, form the acrostic MA, VE, PU which designate the author's name Publius Ver-

gilius Maro. In these lines the word <u>leuis</u> alludes to the word λεπτή and <u>pura</u> subtly designates the word καθαρός which was also an important keyword of Callimachean style. For <u>leuis</u>, compare Cinna's verses which were attached to his elegant gift of the <u>Phaenomena</u>. For a discussion of the Vergilian acrostic see E.L. Brown, <u>Numeri Vergiliani:</u> <u>Studies in "Eclogues" and Georgics</u> (Brussels: Latomus, 1963), pp. 96-114 and D.O. Ross, <u>Backgrounds to Augustan Poetry</u> (Cambridge: Cambridge University Press, 1975), p. 29. For the Aratean acrostic see also E. Vogt, "Das Akrostichon in der griechischen Literatur, <u>A & A</u>, 13 (1967), pp. 83-87.

[52]Compare Clausen, p. 183 for other praise of Aratus' scholarly qualities by Callimachus (fr. 460).

[53]See Maass, <u>Commentariorum</u>, p. 79.

[54]Longinus compares line 298 from the <u>Phaenomena</u> with Homer's <u>Iliad</u> 15.624-628 in his <u>De Sublimitate</u> 10.5-6 and awards the prize for sublimity to Homer.

[55]See Mair, <u>Aratus</u>, pp. 249-251, n. f.

[56]See Mair, <u>Aratus</u>, p. 205 and D.R. Dicks, <u>Early Greek Astronomy to Aristotle</u> (Ithaca, N.Y.: Cornell University Press, 1970), pp. 87-88.

[57]See H. Weinhold, "Die Astronomie in der Antiken Schule" (Inaugural Dissertation: Munich, 1912), p. 24; Erren, p. 5; Ludwig, "Die Phainomena Arats", p. 426; Marrou, <u>Histoire</u>, p. 277; Martin, <u>Histoire</u>, p. 9; Stahl, p. 71; Sarton, II, 312; M.L. Clarke, <u>Higher Education in the Ancient World</u> (London: Routledge and Kegan Paul, 1971), p. 49; R. Pfeiffer, <u>History of Classical Scholarship From the Beginnings to the End of the Hellenistic Age</u> (Oxford: Clarendon Press, 1968), p. 121; L.D. Reynolds and N.G. Wilson, <u>Scribes and Scholars: A Guide to the Transmission of Greek and Latin Literature</u>, 2nd ed., (Oxford: Clarendon Press, 1974), p. 66.

[58]Clarke, p. 134.

[59]Suetonius, <u>De Grammaticis</u> 16 writes of Q. Caecilius Epirota who added the poet Vergil to the list of Latin school authors. In later years the prose treatises of Seneca the Younger, the <u>Epistulae</u> of Horace, the <u>Fasti</u> of Ovid, the <u>Pharsalia</u> of Lucan and the <u>Thebais</u> of Statius were added to the list. E.R. Curtius, <u>European Literature and the Latin Middle Ages</u>, trans. W.R. Trask (New York: Harper and Row, 1963), p. 49 writes that Walter of Speyer (fl. 975) read Vergil, Homer (<u>Ilias Latina</u>), Martianus Capella, Horace, Persius, Juvenal, Boethius, Statius, Terence and Lucan in school. Bilingual editions of certain authors may also have served an educational purpose. One such edition of Vergil was discovered in Egypt between Akabah and Gaza, for which see Marrou, <u>Histoire</u>, p. 388.

[60]Commentaries to the <u>Phaenomena</u> were written by both grammarians and astronomers, but little difference between the two types of explana-

tory guides seems to be evident since all commentators approached the
Phaenomena as a work of both scientific and literary value, according to
Weinhold, p. 25. Marrou, Histoire, p. 278, however, writes that more of-
ten grammarians commented on the poem. Clarke, p. 164, n. 259 criticizes
Marrou's claim and states that Marrou exaggerates the extent to which
the teaching of astronomy through the Phaenomena was in the hands of
grammarians.

[61]Martin, Histoire, pp. 231-232 points out that Scorialensis
Σ III 3, for example, contains the Phaenomena of Aratus together with
scholia and Vita IV.

[62]Marrou, Histoire, p. 277.

[63]The problem of the stage at which the student would have studied
the Phaenomena is not as important as the fact that the work was used in
schools as an instructional text. The work may have been used at the
level of the grammaticus, for as D.L. Clark, Rhetoric in Greco-Roman Edu-
cation (New York: Columbia University Press, 1957), p. 61 notes, the
school of the grammaticus was concerned with more than grammar. H.I.
Marrou, Saint Augustin et la fin de la culture antique (Paris: Éditions
E. de Boccard, 1958), p. 226 remarks that there were many lists of the
so-called "liberal arts" in antiquity. These usually included the study
of astronomy.

[64]Clarke, p. 62 writes that since Cicero made his translation of
the Phaenomena early in his life, he must have had early astronomical
instruction.

[65]For the date see Preface, n. 2.

[66]Scholars debate whether Vergil borrowed this from Aratus or from
Theocritus (Idyll 17.1). According to Gow, II, 327 the two poems of Theo-
critus and Aratus are nearly contemporary. One or the other may be a com-
pliment paid to the other, but the view that a poem should begin with
Zeus is much older than the Hellenistic Age. Vergil's Iouis omnia plena,
however, is closer to Aratus' lines 2-4 than to the corresponding lines
from Theocritus' poem. Compare also R.S. Fisher, "Conon and the Poet:
A New Solution to Eclogue 3.40-42", manuscript accepted for publication
in Latomus, 41 (1982).

[67]Ovid's translation, according to Lactantius, Institutiones Di-
uinae 2.5.24 was a shortened one. Compare n. 6.

[68]See Περὶ Κατασκευῆς Ἀρατείας Σφαίρας by Leontius contained in
Maass, Commentariorum, pp. 559-567.

[69]See n. 59. The problem of bilingualism in connection with trans-
lation will be discussed in the following chapter.

[70]For Spain, Britain and Ireland see P. Courcelle, Les lettres
grecques en occident de Macrobe à Cassiodore (Paris: E. de Boccard,
1943), p. 390. For Gaul and Africa see p. xvi; for Italy see p. 390.

[71]For Augustine, see Courcelle, pp. 155, 179; for Jerome, see Courcelle, p. 52; for Fortunatus, see p. 250; for Gregory the Great, see Courcelle, p. 391. Courcelle, p. 235 also notes that it is difficult to know the extent of Sidonius Apollinaris' Greek learning, but on p. 244 he mentions that Sidonius knew Aratus' poem.

[72]Courcelle, p. 155.

[73]The translation of Germanicus inspired the scholia which may be found in A. Breysig, ed., Germanici Caesaris Aratea cum Scholiis (Hildesheim: Georg Olms Verlagsbuchhandlung, 1867, repr. 1967), p. 55ff. For its usage as a school text see Weinhold, p. 90 and Sieg, p. 26.

[74]For a discussion of Germanicus' corrections of errors in the Phaenomena see Sieg, p. 17ff. and J. Maybaum, "De Cicerone et Germanico Arati Interpretibus" (Dissertatio Inauguralis, Rostoch, 1889), p. 40ff.

[75]Compare Excerptum de Astrologia Arati in Maass, Commentariorum, pp. 307-312.

[76]For a discussion of the use of Bede's Liber de Temporibus as a school text, see D. Knowles, The Evolution of Medieval Thought London: Longmans, Green, 1962), p. 74. For the group of works entitled De Opusculis Boetii see P. Lehmann, ed., Mittelalterliche Bibliotheks-kataloge Deutschlands und der Schweiz (Munich: C.H. Beck'sche Verlags-buchhandlung, 1911, repr. 1969), I, 250.

[77]Codex 250 may be found in G. Scherrer, Verzeichnis der Hand-schriften der Stiftsbibliothek von St. Gallen (Hildesheim: Georg Olms Verlagsbuchhandlung, 1875, repr. 1975), pp. 92-94. Codex 902 may be found on pp. 316-318.

[78]O. Pedersen, "A Fifteenth Century Glossary of Astronomical Terms" in O.S. Due, H.F. Johansen, B.D. Larsen, eds., Classica et Mediaevalia Dissertationes (Copenhagen: Gyldendalian, 1973), IX, 584. Compare n. 59. Aratus is not among the authors read by Walter of Speyer.

[79]A terminus for the popularity of the work is the publication of the editio princeps in Venice in 1499. Compare J. Martin, ed., Arati Phaenomena (Florence: "La Nuova Italia" Editrice, 1956), p. xi. But for the remarkable Nachleben of Aratus' Phaenomena after the Renaissance see Buescu, Cicéron, pp. 23-28. After the Renaissance the interest in the Phaenomena as a practical work of astronomy ceases, only to be replaced by an antiquarian interest in the poem as an important work of Hellenistic Greek literature.

II.

THE ROMAN ART OF TRANSLATION

In addition to playing an important role in the history of the
Phaenomena, the four Latin translations of the poem have great signifi-
cance for the history of translation at Rome since they comprise the only
group of more or less complete translations of a single Greek poem which
is itself extant in its entirety. These Latin translations of the Phae-
nomena may be placed within a long tradition beginning with the transla-
tion of Homer's Odyssey into Latin Saturnians by Livius Andronicus in the
third century B.C. Because this and many of the other surviving exam-
ples of Latin translations from the Greek are extant only in fragments,
the existence of extensive translations by Cicero, Germanicus, Avienus
and the anonymous author of the Aratus Latinus provide a fertile area for
observation and investigation.[1]

Translation at Rome appears to have been a complex literary phe-
nomenon. Ancient critics had no comprehensive theory of translation and,
to add to our confusion, modern theories of ancient translation seem as
numerous as their proponents.[2] In this chapter, clarification of the
Roman views of translation will be provided by means of an examination
of evidence from Latin authors who refer to the process of rendering a
Greek model into Latin. These various testimonia, which span the cen-
turies from Terence to Gregory the Great, contain indications of many
aspects of Latin translation: its nature, its function and its form.
By inspecting the testimonia, we may see more clearly the prominence

45

of translation in Latin literature and the important place held by the
translations of Aratus' _Phaenomena_ in both Latin literature and the tra-
dition of translation at Rome.

A general concept of translation among the Romans can be clearly
demonstrated through the words which were employed to designate the act
of translation. The vocabulary of translation falls into three groups.
The first group contains words which are used to refer exclusively to
the process of Greek-to-Latin rendering: _transferre, interpretari, red-
dere_ and _uertere_; the second is comprised of words which denote both
Greek-to-Latin rendering and borrowings within the Latin language: _con-
uertere_ and _exprimere_; the third consists of two special words denoting pro-
cesses identical with those in the second group: _imitari_ and _aemulari_.[3]

The word _transferre_ used in connection with Greek-to-Latin ren-
dering is found in the prologue to the _Eunuchus_ where Terence admits to
having "transported characters" from a Greek model into his own play
(31-33):

> . . . eas se hic non negat
> personas _transtulisse_ in Eunuchum suam
> ex Graeca . . .

Since the word _transferre_ means essentially "to carry over" as in "to
transport troops or material", it is readily extended to translation
as a movement from one language to another. In addition, the use of the
verb, _transtulisse_, together with the phrase _ex Graeca_ strengthens the
simple sense of a conveyance of Greek material into a Latin equivalent.
Macrobius uses _transferre_ in a literary sense to comment on Vergil's
translation of Homer (_Saturnalia_ 5.3.1):

> Et si uultis me et ipsos proferre uersus
> ad uerbum paene _translatos_ . . .

Since the words <u>uersus translatos</u> refer to lines which Vergil has taken
from the Greek poem, <u>translatos</u> is clearly used in an interlingual sense.[4]

A second verb, <u>interpretari</u>, which may be defined etymologically
as "to expound"[5] is used in Cicero's <u>De Officiis</u> 1.40.142 to denote a
rendering from the Greek language into the Latin:

> Haec autem scientia continentur ea, quam
> Graeci εὐταξίαν nominant, non hanc, quam
> <u>interpretamur</u> modestiam . . .

In this passage the word <u>interpretamur</u> explains the process of translat-
ing a Greek word into Latin. Cicero makes a distinction between Greek
εὐταξία and Latin <u>modestia</u>, thus emphasizing that translation can in-
volve more than transliteration of the Greek letters. The word <u>inter-
pretari</u> and its cognates, however, also have another shade of meaning as
Horace indicates (<u>Ars Poetica</u> 133-134):

> nec uerbo uerbum curabis <u>reddere</u> fidus
> <u>interpres</u> . . .

Although the word <u>interpres</u> has its usual meaning of "a translator from
Greek into Latin", in these lines it is used in a pejorative way in con-
nection with the process of literal translation which was held in low
esteem among both Latin translators and critics.[6] The verb <u>reddere</u>,
"to return", in this same passage also denotes interlingual translation
but it lacks the pejorative tone present at times in the word <u>interpres</u>.[7]

One other verb, <u>uertere</u>, "to turn", is used by Latin writers to
represent the act of translation from the Greek,[8] and Cicero's <u>Tusculanae
Disputationes</u> 2.11.26 contain an example of its use in regard to trans-
lation:

> . . . sed sicubi illi defecerunt, <u>uerti</u> enim
> multa de Graecis, ne quo ornamento in hoc genere
> disputationis careret Latina oratio.

Again the use of the phrase <u>de Graecis</u> identifies more clearly the inter-
lingual nature of the word <u>uerti</u> and serves as an important clue that
this verb and the three previously mentioned translation verbs exhibit
the same meaning, a borrowing from another language.[9]

The identification of these words as part of the Latin transla-
tion vocabulary is further strengthened by their combined use in state-
ments found in the works of Latin writers themselves. Cicero, for exam-
ple, employs several of them in a single passage (<u>De Finibus</u> 1.3.7):

> Quamquam, si plane sic <u>uerterem</u> Platonem
> aut Aristotelem, ut <u>uerterunt</u> nostri poetae
> fabulas . . . Locos quidem quosdam, si uide-
> bitur, <u>transferam</u>, et maxime ab iis quos modo
> nominaui, cum inciderit ut id apte fieri possit,
> ut ab Homero, Ennius Afranius a Menandro solet.

The use of the words <u>Platonem aut Aristotelem</u> in connection with the verb
<u>uertere</u> and the association of the verb <u>transferam</u> with <u>ab Homero, Ennius</u>
<u>Afranius a Menandro</u> provide a clear indication that both verbs may be
identified with the rendering of Greek literary material into the Latin
language. In this passage, in addition, Cicero gives another important
clue about the nature of Latin translation, for he implies that transla-
tion can encompass large works or individual passages, <u>locos quosdam</u>.
This statement should be added to Cicero's declaration, mentioned above
(<u>De Officiis</u> 1.40.142), that translation also involves individual words.

Another example of the multiple use of translation words can be
found in Cicero's <u>De Optimo Genere Oratorum</u> 5.14:

> . . . nec <u>conuerti</u> ut <u>interpres</u>, sed ut orator
> sententiis isdem et earum formis tamquam figuris,
> uerbis ad nostram consuetudinem aptis. In quibus
> non uerbum pro uerbo necesse habui <u>reddere</u> sed genus
> omne uerborum uimque seruaui.

In this passage from the preamble to his translation of the works of

Aeschines and Demosthenes, Cicero employs two words, interpres and red-

dere, which have been identified as part of the translation vocabulary

of the Romans. Interpres, used in an interlingual sense, has a pejora-

tive tone similar to that found in Horace's Ars Poetica 133-134, but it

is essentially synonymous with reddere. A verb from the second group of

words denoting translation, conuerti, also pertains to the process of

Greek-to-Latin translation, and it is identical in meaning with the two

other verbs in the passage.[10]

This second set of words which describe the act of translation

contains the verbs conuertere, literally "to turn around", and ex-

primere literally, "to press out". In most cases they are used in an

interlingual sense in reference to the Greek, but at times, the evidence

indicates that they are employed in an intralingual way to denote bor-

rowings within the Latin language. The verb conuertere, as the example

from De Optimo Genere Oratorum 5.14 has shown, is largely a word by which

Latin authors expressed the act of Greek-to-Latin translation. Cicero

avails himself of the word in this sense again in the same work (7.23):

> . . . quae si e Graecis omnia conuersa non
> erunt, tamen ut generis eiusdem sint, elabora-
> uimus --, erit regula, ad quam eorum dirigantur
> orationes qui Attice uolent dicere. Sed de nobis
> satis. Aliquando enim Aeschinem ipsum Latine di-
> centem audiamus.

In this instance, the interlingual nature of conuersa erunt is heralded

by the phrase e Graecis, a usage commonly found with words signifying

translation.[11] In addition, another clue about the nature of transla-

tion is provided at the end of the passage since Cicero states that what

follows will be an example of "Aeschines speaking in Latin", a worthy

goal for any Roman translator.

The word conuertere, however, can also be used with reference
to intralingual borrowing. Macrobius expresses his concern, for exam-
ple, about charges of improper borrowing which may be levelled against
the poems of Vergil (Saturnalia 6.1.2):

> . . . exprobrantibus tanto uiro alieni usur-
> pationem nec considerantibus hunc esse fructum
> legendi, aemulari ea quae in aliis probes, et
> quae maxime inter aliorum dicta mireris in ali-
> quem usum tuum opportuna deriuatione conuertere,
> quod et nostri tam inter se quam a Graecis, et
> Graecorum excellentes inter se saepe fecerunt.

The key phrase for understanding the meaning of conuertere in this pas-
sage is quod et nostri, tam inter se quam a Graecis, which contains a
reference not only to translation from Greek sources, but also to bor-
rowing from Latin ones. Conuertere, used to denote each of these two
processes, seems to indicate that, according to Roman standards, bor-
rowing from Greek works and borrowing from other Latin works were one
and the same thing.[12]

Like conuertere, the verb exprimere signals interlingual render-
ing or borrowing within the Latin language. Exprimere is a surprising,
but appropriate, choice for a translation word since in its literal sense
it is applied to various manual arts or to a physical image made by pres-
sure upon another object. Plautus in Pseudolus 56, for example, employs
the word for an image made in wax: expressam in cera ex anulo suam ima-
ginem. In this line exprimere is found with the noun imago, "copy or
likeness" which is used to designate the result of pressing the ring into
the soft material.[13] In a literary sense, by comparison, verbal copies
can be created by the same action, and Cicero provides an example of the
metaphorical use of this verb together with imago in Pro Archia 6.14:

> Quam multas nobis _imagines_ non solum ad
> intuendum, uerum etiam ad imitandum fortis-
> simorum uirorum _expressas_ scriptores et Graeci
> et Latini reliquerunt!

These likenesses have been "pressed out" by both Greek and Latin writers

in much the same way as a sculptor might fashion his likeness from a

malleable material. Catullus, mourning the death of his brother, also

uses this tactile verb when he informs Hortensius that he is sending him

a translation of one of Callimachus' poems in lieu of an original poem

(_Carmen_ 65.15-16):

> sed tamen in tantis maeroribus, Ortale, mitto
> haec _expressa_ tibi carmina Battiadae,

In a practical sense, the word _expressa_ is used as the equivalent of

translata or _uersa_, but in a more artistic sense, it conveys both the

idea that Catullus' translation is an _imago_, a "likeness", and that the

poem has been "sculpted", so to speak, with some effort and physical

strain.[14]

Even when used with an intralingual connotation, the verb _ex-

primere_ shares these same ideas. One such example of _exprimere_ employed

to refer to borrowing from within the Latin language is present in Sene-

ca the Elder's _Controuersia_ 7.1.27 in which he describes the literary

aspirations of a certain Cestius:

> Montanus Iulius, qui comes fuit Tiberii,
> egregius poeta, aiebat illum imitari uoluisse
> Vergili descriptionem . . . at Vergilio imi-
> tationem bene cessisse, qui illos optimos uer-
> sus Varronis _expressisset_ in melius . . .

In this case, the word _expressisset_ refers specifically to the practice

of borrowing material from other Latin authors. The meaning of the verb

is, in real terms, different from that given for _expressa_ in Catullus'

Carmen 65, for in Catullus' poem, exprimere denotes interlingual render-
ing, while in Seneca's statement it specifies intralingual borrowing.
But since each verb describes a process of both artistic and strenuous
adaptation, the act of translation and the act of borrowing can be said
to be, in Roman opinion, identical.

Finally, we may examine the third group of words used for trans-
lation, the controversial imitari and aemulari and their cognates. The
literary concept of imitatio has been defined generally as the reproduc-
tion of the spirit of a work, and aemulatio is usually noted as the ren-
dering of the spirit of a work as well as rivalry with the work itself.[15]
Closer investigation of testimonia from Latin writers demonstrates, how-
ever, that the two concepts are not as vague as modern scholars tend to
make them.[16] Like conuertere and exprimere, the words imitari and aemu-
lari are used in both an interlingual and an intralingual sense. The
word imitari, for example, is found in Cicero's De Optimo Genere Ora-
torum 4.13:

> . . . intellegitur . . . Demosthenes, hunc si qui
> imitetur, eum et Attice dictorum et optime, ut, quoniam
> Attici nobis propositi sunt ad imitandum, bene dicere
> id sit Attice dicere.

In this passage, although the words imitetur and imitandum may mean sim-
ply "to imitate" in a general sense, it is more likely that in this work,
which acts as a preface to Cicero's prose translations, they refer to
translation. Cicero provides no clear indication of the extent or prin-
ciples of imitatio in this regard, but the presence of the words Demos-
thenes and Attice show that the words refer definitely to some rendering
from Greek into Latin, in the matter of style and language, or, in other
words, to translation.

Macrobius also uses the word _imitatio_ to refer to Latin translation in _Saturnalia_ 5.2.13:

> quid quod et omne opus Vergilianum uelut
> de quodam Homerici operis speculo formatum est?
> nam et tempestas mira _imitatione_ descripta est --
> uersus utriusque qui uolet conferat . . .

Macrobius notes that Vergil's poem is a mirror reflection of Homer's, _Homerici operis speculo formatum est_, a statement which calls to mind the previously mentioned association of another translation word, _exprimere_, with _imago_, "likeness". Like Cicero's _imitari_, Macrobius' _imitatio_ is firmly linked with the notion of Greek-to-Latin translation.[17]

Furthermore, the identification of the word _imitari_ with other words which are used to refer to translation can be found in passages where two or more of the words are present.[18] Cicero in his discussion of the importance of philosophical study comments (_Academica_ 1.2.8):

> Et tamen in illis ueteribus nostris, quae
> Menippum _imitati_ non _interpretati_, quadam hi-
> laritate conspersimus, multa admixta et intima
> philosophia . . .

Although the words _imitati_ and _interpretati_ seem to denote different processes, it is more likely that Cicero is using _interpretati_ in its pejorative sense in connection with word-for-word translation in much the same way as Horace uses the word _interpres_ in _Ars Poetica_ 134. Another example of the multiple employment of such verbs is evident in Aulus Gellius' _Noctes Atticae_ 9.9.1-3:

> Quando ex poematis Graecis _uertendae imitan-
> daeque_ sunt insignes sententiae, non semper aiunt
> enitendum, ut omnia omnino uerba in eum, in quem
> dicta sunt, modum _uertamus_.

In this passage, the two words _uertere_ and _imitari_ are clearly synonymous.[19]

The word _imitari_, since it is found with another word designating trans-
lation and with the phrase _ex poematis Graecis_, must refer to the process
of interlingual rendering, or translation.

The word _imitari_ and its cognates, however, also describe a pro-
cess which takes place within the Latin language.[20] Quintilian remarks
on this borrowing in _Institutio Oratoria_ 10.1.90: _Lucanus . . . magis
oratoribus quam poetis imitandus_. Although in this dictum Quintilian of-
fers no concrete definition of _imitandus_, it is possible to identify the
word, on analogy with the parallelism established between interlingual
imitatio and translation, as the equivalent of intralingual _conuertere_
and _exprimere_ which are concerned with borrowing from within the language
itself. Quintilian's statment might more correctly mean, therefore, that
orators had more claim than poets to "borrowing from" Lucan. Modern cri-
tics can argue that borrowing from other Latin authors and translating
Greek works are two separate things, but Latin _testimonia_ demonstrate
consistently that the two processes are intricately related.

A similar double interpretation is possible for the word _aemulari_
and its cognates _aemulatio_ and _aemulus_. Quintilian in _Institutio Oratoria_
10.1.123, for example, comments on the philosophical endeavors of Cicero,
especially his versions of Plato's works:

> Idem igitur M. Tullius, qui ubique, etiam in
> hoc opere Platonis _aemulus_ extitit.

The exact meaning of _aemulus_ is unclear from the context, but although
modern theories state that _aemulatio_ refers strictly to the agonistic
ideal of Latin writers, the ancient _testimonia_ indicate only that the
word is synonymous with the concept of Greek-to-Latin translation.[21] This
translation aspect of the words may be seen more clearly in Aulus Gellius'

discussion of comparative lines from Parthenius and Vergil. Parthenius

wrote Γλαύκω καὶ Νηρεῖ καὶ εἰναλίω Μελικέρτη and Vergil copied the line

in the first Georgic, line 437: Glauco et Panopeae et Inoo Melicertae.

Aulus Gellius comments in turn on the similarity of the two lines (Noctes

Atticae 13.27):

> Eum uersum Vergilius aemulatus est itaque
> fecit duobus uocabulis uenuste inmutatis parem . . .

According to Aulus Gellius, Vergil made his line equal to the original by

the graceful alteration of two words, and it is clear from the passage

that aemulatio, according to Gellius, involves the exact rendering of

some Greek words into Latin as well as the transferal of the Greek metre

and structure; in effect, Vergil's effort is identifiable as the process

of Greek-to-Latin translation.[22] Vergil's handling of Parthenius' line

and the suggestion that aemulatio and translation are essentially iden-

tical further supports the idea that competition or rivalry is inherent

in the act of translation. Translation involves the author's patterning

his work after a Greek original and establishing it within the genre of

the model; adaptation, improvement and competition, therefore, all belong

to translation and cannot be confined to aemulatio alone.[23]

Additional evidence for the equivalence of aemulari used in an

interlingual sense and other translation verbs is found in passages

which contain the words in combination. The younger Pliny, for example,

unites aemulari and exprimere in his address to Arrius Antoninus in Epis-

tula 4.18.1:

> Quemadmodum magis adprobare tibi possum,
> quanto opere mirer epigrammata tua Graeca, quam
> quod quaedam Latine aemulari et exprimere temp-
> taui?

The reference in this passage to epigrammata tua Graeca provides an im-
portant clue to the common interlingual sense of each of these two verbs.
The words, however, are not redundant, for exprimere, as noted earlier,
can be used to convey the idea of effort and of a translation composed
with some exertion. Pliny in the remaining portions of this brief let-
ter, complains of both the inadequacy of his own ability and the poverty
of the Latin language, two things which, in his mind, hinder his success-
ful translation of Arrius' epigrams. The verb exprimere is therefore a
well-chosen one in this context, since it represents accurately Pliny's
dogged attempt, and perhaps, his frustration.

Finally, the verb aemulari can be employed in an intralingual
sense.[24] In a discussion of the Roman grammarian Crispus, for example,
Ausonius uses aemulus to describe the act of borrowing (Commemoratio Pro-
fessorum Burdigalensium 21.7-9):

> Creditus olim feruere mero,
> ut Vergilii Flaccique locis
> aemula ferres.

Crispus, who wrote in Latin, borrowed some elements from the earlier works
of Vergil and Horace. This borrowing process as it is identified in the
passage is identical with the act of borrowing denoted by means of the
words conuertere and exprimere. In addition, it is indistinguishable
from the process of interlingual aemulatio which is the equivalent, in
practical terms, of translation.

These assembled testimonia contradict, therefore, the modern and
more usual concepts of Roman translation, imitatio and aemulatio. Accord-
ing to such modern theories, translation is only part of the larger pro-
cess of imitatio; imitatio is the creative production of poetry which

renders form, while translation, the inferior quantity, simply renders content. Aemulatio, by comparison, is said to involve the literary rivalry of Latin writers with both their Greek and Roman predecessors.[25] The evidence presented above, however, indicates that the Romans saw little practical difference among these terms. The words transferre, interpretari, reddere and uertere are used exclusively to refer to Greek-to-Latin translation, while conuertere, exprimere, imitari and aemulari are used to explain the process of translation as well as that of borrowing from within the Latin language. Although interpretari and exprimere possess added connotations, the eight terms can be taken to be synonymous, indicating that borrowing from Latin or Greek sources (that is, translating) involves the same action and produces the same result.

In addition to clarifying the concept of translation from a Roman viewpoint, testimonia provide information about the function of translation, or the reasons for which translation was undertaken by the Romans. Four explanations are possible. First, it seems that translated works were necessary aids for Romans who did not understand Greek texts.[26] Petronius, for instance, tells of Trimalchio following a Greek reading session by using a Latin translation (Satyricon 59.3):

> Ipse Trimalchio in puluino consedit, et cum
> Homeristae Graecis uersibus colloquerentur, ut
> insolenter solent, ille canora uoce Latine lege-
> bat librum.

Although we may call the portrait of Trimalchio exaggerated, we can admit that his use of a translation is plausible, and perhaps indicative that the Greekless audience was an important consideration and incentive for a Roman translator. Cicero also remarked on the value of bringing

the Greek originals to Romans in Latin translations (De Finibus 1.3.7):

> Quamquam, si plane sic uerterem Platonem
> aut Aristotelem, ut uerterunt nostri poetae
> fabulas, male, credo, mererer de meis ciuibus,
> si ad eorum cognitionem diuina illa ingenia
> transferrem.

In this passage, Cicero makes use of the words de meis ciuibus to express

the potential audience for translation. In general, however, because

of the widespread knowledge of Greek among the educated and literary

class at Rome, this function cannot have been of overwhelming signifi-

cance until the period of late Latin literature, when the comprehension

of the Greek language began to decline in the West.

Translations by Latin writers could also be undertaken for the

purpose of education and rhetorical exercise. Cicero proclaims their use-

fulness in this regard in De Oratore 1.34.155:

> postea mihi placuit eoque sum usus adulescens,
> ut summorum oratorum Graecas orationes explicarem.
> quibus lectis hoc adsequebar, ut cum ea quae legeram
> Graece, Latine redderem . . . optimis uerbis uterer . . .

Cicero specifically notes that his exercises in translation began when

he was a youth, adulescens, a word which may be compared with the phrase

admodum adulescentulus found in De Natura Deorum 2.41.104 in a reference

to Cicero's translation of the Phaenomena. Pliny the Younger, writing

to Fuscus on methods of study, also notes that translations provided

sound educational training (Epistula 7.9):

> Utile in primis, et multi praecipiunt, uel ex
> Graeco in Latinum uel ex Latino uertere in Graecum.
> Quo genere exercitationis proprietas splendorque
> uerborum, copia figurarum, uis explicandi, praeterea
> imitatione optimorum similia inueniendi facultas
> paratur; simul quae legentem fefellissent, transferen-
> tem fugere non possunt. Intellegentia ex hoc et
> iudicium adquiritur.

In this passage, Pliny, like Cicero, stresses the value of translation
from Greek into Latin, but also notes the efficacy of translation from
Latin into Greek, a practice which he himself had followed in the trans-
lation of Arrius Antonius' epigrams. To designate the process of trans-
lation, Pliny uses the verbs uertere and transferre, which express the
same action as the verb reddere in the previous statement of Cicero.
Pliny also employs the word imitatio, which in its context in the letter
refers to both translation from Greek into Latin and translation from
Latin into Greek.

The third function of Greek-to-Latin translation was enrichment
of the Latin language.[27] Many Latin authors thought that Latin was sad-
ly deficient as a vehicle for great expression and Seneca's Epistula 58.1
gave voice to this common and long-standing point of view:

> Quanta uerborum nobis paupertas, immo egestas
> sit, numquam magis quam hodierno die intellexi.
> Mille res inciderunt, cum forte de Platone loquere-
> mur, quae nomina desiderarent nec haberent, quaedam
> uero, ⟨quae⟩ cum habuissent fastidio nostro perdi-
> dissent.

Seneca's lament pertained directly to philosophical vocabulary and was
shared by many other Latin writers.[28] But Cicero, almost one hundred
years earlier, had already proclaimed the Latin language to be superior
in fact to the Greek (De Finibus 1.3.10):

> Non est omnino hic docendi locus; sed ita
> sentio et saepe disserui, Latinam linguam non modo
> non inopem, ut uulgo putarent, sed locupletiorem
> etiam esse quam Graecam.

Cicero was eager to make the Latin language locupletior, "richer", and
his answer to critics who complained of its poverty was to try to improve
it further.[29] Such improvement, in Cicero's opinion, was possible through

translation (De Oratore 1.34.155):

> . . . ut . . . non solum optimis uerbis uterer, et
> tamen usitatis, sed etiam exprimerem quaedam uerba imi-
> tando, quae noua nostris essent, dum modo essent idonea .

In this explanation of his method, Cicero uses the words exprimerem and

imitando, here employed in its interlingual sense. The word exprimere

has its usual and important connotation of "to translate with a great

deal of effort". It is most appropriate in this context, for it conveys

an idea of the difficulty of the task to which Cicero had applied himself.

Testimonia indicate also that the Latin writers translated Greek

works primarily, perhaps, with the purpose of producing outstanding

works of Latin literature. Cicero, for example, thought very highly of

his own translation of Aratus' Phaenomena, for he mentions it numerous

times in his prose works.[30] Balbus prefaces his lengthy quotations from

Cicero's translation of the Greek poem with a brief history of the under-

taking (De Natura Deorum 2.41.104):

> "Utar inquit carminibus Arati eis quae a te
> admodum adulescentulo conuersa ita me delectant
> quia latina sunt ut multa ex iis memoria teneam".

In reference to Cicero's translation Balbus employs the word conuersa

which, as noted earlier, can designate both Greek-to-Latin translation

and borrowing from Latin sources. Cicero's translation itself supports

this dual association since in it he both renders the Greek verses and bor-

rows from earlier Latin works, such as those of Ennius. Cicero clearly

wished to impress upon the reader that his translation was so noteworthy

and delightful that it merited enjoyment and memorization by great men.

Catullus, furthermore, did not hesitate to send a translation of

a poem by Callimachus to Hortensius, and the result of his pronouncement

in _Carmen_ 65 is the woeful tale of the locks of Berenice.[31] Independence was not a question for the reader of Catullus' translation or that of Cicero because the authors believed that in their translations they were making important contributions to Latin literature. Plagiarism, in addition, was of no concern for these translators since in each case the Greek poem upon which the Latin translation was based was obvious or actually acknowledged.[32] The _Phaenomena_ of Aratus, famous for its literary merits and scientific usefulness, was probably employed in schools, and Cicero's translation of it would, thus, need no overt acknowledgement. Catullus refers to Callimachus with the word _Battiadae_ (_Carmen_ 65.16) thereby affirming his model and his great debt to Callimachean aesthetic theory.[33] Greek poems seem to have been in the common domain, and the practice of reading Latin poems with the corresponding passages from the Greek model in mind, a lively pastime of Roman critics, served to glorify further the task of translation and to remove any taint of plagiarism from it.[34] Plagiarism was not a matter of borrowing. It was, rather, a matter of borrowing badly, a problem of theft and an insult to the original model.[35]

Finally, Latin _testimonia_ contain evidence that the Roman concept of translation was actually twofold. One type of translation can be identified as the _sensus de sensu_, or non-literal, type of translation in which the translator was concerned to convey the spirit, not the letter, of the original. The other, which can be called _uerbum de uerbo_ translation, involved a word-for-word, or literal, rendering of the original text.[36] The Romans of the Republic and early Empire were aware of the practice and demerits of _uerbum de uerbo_ translation. Terence's _Adel-_

phi 9-11, for example, present a defense against one of the many accusa-
tions levelled against his plays:

> . . . eum Plautus locum
> reliquit integrum. eum hic locum sumpsit sibi
> in Adelphos, uerbum de uerbo expressum extulit.

Terence's reference to his own comic translations as uerbum de uerbo is
a puzzling one, for his translations of the Greek plays do not seem to
have been verbatim copies of the models. Some scholars explain the phrase
as applicable only to one scene in the play, while others believe that
Terence, in an effort to placate critics and audience alike, is simply
not telling the truth.[37] Each explanation may have some element of truth,
but if another passage from Terence's plays is compared with these lines
from the Adelphi, it is clear that the phrase uerbum de uerbo is not to
be taken seriously as Terence's own rule for translation. In the pro-
logue to the Eunuchus, lines 7-8, Terence criticizes his arch-rival, Lus-
cius Lanuvinus:

> qui bene uortendo et easdem scribendo male
> ex Graecis bonis Latinas fecit non bonas.

Terence, in other words, states that faithful word-for-word translation
(bene uortendo) does not necessarily make for good plays.[38] In addition,
the verb expressum in the context of Adelphi 9-11, when viewed according
to Terence's pronouncement in the Eunuchus, suggests further that his
translations were made with considerable effort and were not to be con-
sidered slavish and artless renderings of the Greek plays.

Cicero also expresses his distaste for such rigid literal trans-
lation (De Optimo Genere Oratorum 5.14):

> In quibus non uerbum pro uerbo necesse habui
> reddere, sed genus omne uerborum uimque seruaui.

Using the verb reddere, Cicero demonstrates that his translation was not

the inferior word-for-word translation, but one which preserved the spirit

of the words themselves. More criticism of literal translation can be

found in De Finibus 3.4.15:

> Nec tamen exprimi uerbum e uerbo necesse erit,
> ut interpretes indiserti solent, cum sit uerbum quod
> idem declaret magis usitatum. Equidem soleo etiam,
> quod uno Graeci si aliter non possum, idem pluribus
> uerbis exponere.

In this statement, Cicero, like Terence, employs the verb exprimere, but

in Cicero's declaration the additional connotation of effort or strain

must be ironic. To emphasize further the undesirableness of word-for-

word translation, Cicero uses the noun interpretes in its pejorative

sense with indiserti, "lacking in eloquence", an equally belittling ad-

jective.[39]

In spite of the general disregard for literal translation among

Latin writers and critics, it is likely that pre-Christian Latin trans-

lators had no real choice in the method of translation which they could

employ. Tradition and convention dictated that sensus de sensu was the

only means of translation available for artistic literary renderings from

the Greek.[40] The first major Latin writer, however, who found that he

could choose, without adverse criticism, to translate according to the

principles of either sensus de sensu or uerbum de uerbo translation was

St. Jerome. With his undertaking of biblical translation, the acceptable

criteria for literary translation changed drastically. He espoused the

use of sensus de sensu translation after the practice of Cicero, for exam-

ple, in all texts except sacred ones (Epistula 57.5):

> Ego enim non solum fateor, sed libera uoce
> profiteor me in interpretatione Graecorum absque
> scripturis sanctis, ubi et uerborum ordo mys-
> terium est, non uerbum e uerbo sed sensum ex-
> primere de sensu.

In this passage, Jerome, like previous commentators on translation, em-
ploys the usual words which refer to translation from the Greek, inter-
pretatione and exprimere. The word exprimere, since it is applied to
the more demanding sensus de sensu translation, conveys a feeling of ef-
fort, but the word interpretatione has no pejorative connotation. In
its application to non-literal translation, the word, in this context,
means simply "translation" in its basic sense of rendering a Greek text
into Latin.

This proclamation of Jerome, however, paved the way finally for
the adoption of the principles of word-for-word translation even for
texts which were not of sacred origin. And Boethius in the sixth century
A.D. was the first to accept uerbum de uerbo translation for secular texts
(In Isagogen Porphyrii, editio secunda 1.1):

> in qua [serie translationis] quidem uereor ne
> subierim fidi interpretis culpam, cum uerbum uerbo
> expressum comparatumque reddiderim.

Boethius, like Jerome, used the verb expressum, but in his view, expres-
sum, a word which conveyed a sense of effort, was applicable with justi-
fication to literal translation. The phrase fidus interpres, however,
retains the negative association which it had acquired in previous cen-
turies.[41] Its use in Boethius' statement indicates that even at this
late date, Roman writers believed that uerbum de uerbo translation was
inferior to sensus de sensu translation and felt compelled to apologize
for attempting to render a Greek work in this fashion.

The legacy of uerbum de uerbo translation, which was espoused by both Boethius and Jerome, was, not surprisingly, a large number of unintelligible Latin translations. An exasperated Gregory the Great depicts the state of translation in his own time (Gregorius Eulogio Patriarchae Alexandrino, Epistle 2):

> Indicamus praeterea quia grauem hic interpretum
> difficultatem patimur. Dum enim non sunt, qui sen-
> sum de sensu exprimant, sed transferre uerborum sem-
> per proprietatem uolunt, omnem dictorum sensum con-
> fundunt. Unde agitur ut ea quae translata fuerint
> nisi cum graui labore intellegere nullo modo ualeamus.

Although the translators were following the model, word for word, they produced only translations which could not be understood.[42] This state of affairs must have been especially distressing to Gregory and to others whose ability to read Greek was slight or non-existent, for without the availability of readable Latin translations, the link to the Greek heritage of the Latin West was effectively obliterated.

Translation, therefore, plays an important role in the history of Latin literature. Some translations, like those of Cicero, Germanicus and Avienus, are based on the method of sensus de sensu which concerns itself with rendering the spirit, not the letter of the work, while others, like the prose translation, Aratus Latinus, are based upon principles of uerbum de uerbo. Such translations can be judged at once as aids to understanding, exercises, the means for the renewal of Latin expression and most importantly, artistic, creative and worthwhile endeavors without the fair accusation of plagiarism. Translation to the Romans is, by nature, the rendering into Latin of a Greek literary source and can be at the level of word, phrase, passage or entire work. Its

vocabulary is divisible only into two broad categories which are dependent on the connection of the words with interlingual rendering or intralingual borrowings. These categories prove to be overlapping ones because the act of translation and the act of borrowing appear to involve an identical process of literary adaptation and, at the same time, the idea of striving to equal the achievements of the model. No dividing line between interlingual or intralingual composition is evident, for to the Roman translator, the model's excellence, no matter what the language, is of greatest significance.

NOTES

[1]The remains of Livius Andronicus' translation may be found in
E.H. Warmington, ed., Remains of Old Latin (Cambridge, Mass.: Harvard
University Press, 1935, repr. 1967), pp. 24-43. See S. Mariotti, "Livius
Andronicus", Der Kleine Pauly, III, 694. For fragments of Ennius' trans-
lations of Greek plays see H.D. Jocelyn, ed., The Tragedies of Ennius
(Cambridge: Cambridge University Press, 1969). The original Greek
plays translated by Plautus and Terence are not extant. See E.W. Handley,
Menander and Plautus: A Study in Comparison (London: H.K. Lewis, 1968),
p. 8 comments that Plautus follows Menander more closely than modern
editors would allow and he presents evidence for comparison using Plau-
tus' Bacchides 494ff. Compare D. Bain, "Plautus Vortit Barbare: Plau-
tus, Bacchides 526-61 and Menander, Dis exapaton 102-12" in D. West and
T. Woodman, eds., Creative Imitation and Latin Literature (Cambridge:
Cambridge University Press, 1979), pp. 17-34. G. Norwood, The Art of
Terence (Oxford: Blackwell, 1922), pp. 6-12 presents several reasons
which, in his opinion, indicate that Terence was no mere translator, but
an innovator. Catullus in the first century B.C. translated both a
poem of Sappho and one of Callimachus; while Sappho's poem is extant, the
Callimachean original survives only in a very fragmentary state. See
K. Quinn, Catullus: An Interpretation (London: B.T. Batsford, 1972),
pp. 56-60, 264-266.

[2]Several modern surveys contain extensive discussions of trans-
lation. See A. Reiff, Interpretatio, Imitatio, Aemulatio: Begriff und
Vorstellung literarischer Abhängigkeit bei den Römern (Würzburg: Konrad
Triltsch, Graphischer Grossbetrieb, 1959), pp. 38-50 and S. Brock, "As-
pects of Translation Technique in Antiquity", GRBS, 20 (1979), pp. 69-87.
Translation is rarely considered independently of imitatio and aemulatio.

[3]Another verb, sequi, is used in connection with the act of trans-
lation; its use, however, is infrequent and not highly significant. For
one example, see Quintilian, Institutio Oratoria 10.1.122. See also
Reiff, pp. 107-108 who equates sequi with imitari.

[4]For other examples of transferre in similar contexts see: Cic-
ero, Ad Atticum 6.2.3; Quintilian, Institutio Oratoria 2.15.21, 7.4.4,
7.4.7; Macrobius, Saturnalia 5.11.1, 6.1.5.

[5]The Oxford Latin Dictionary states that the etymology of inter-
pretari, which is connected with interpres, is dubious, but perhaps
connected with pretium. C.T. Lewis and C. Short, A Latin Dictionary hold
that its etymology is inter plus the Sanskrit root prath-, "to spread
abroad". T.G. Tucker, A Concise Etymological Dictionary of Latin (Halle:
Max Niemeyer Verlag, 1931) presents the etymology as a development of
two senses of *per-et-, "to lay out, to view, to expound" and "to carry
forward".

[6]Reiff, p. 107 states that the process represented by the word _interpretari_ had two distinct sides, one concerning the activity of grammatical interpreters and one concerning poetic translation. For other examples of the word see Cicero, _De Finibus_ 3.4.15; _Ad Familiares_ 9.26.2; Varro, _De Lingua Latina_ 7.17; Quintilian, _Institutio Oratoria_ 8.6.44.

[7]Another example of _reddere_ can be found in Cicero, _De Optimo Genere Oratorum_ 5.14.

[8]For other examples of _uertere_ see Plautus, _Asinaria_ 11; _Trinummus_ 19; Quintilian, _Institutio Oratoria_ 10.5.2-3. Reiff, p. 103 claims that the process described by the word _uertere_ has two aspects, free adaptation and meticulous faithfulness. On p. 106 he claims that the verb is a subset of the word _interpretari_. Such a claim is the result of the over-systematization which plagues parts of his book. Compare M. Fuhrmann's review in _Gnomon_, 33 (1961), pp. 445-448. A. Traina in "Commento alle traduzioni poetiche di Cicerone", _Vortit Barbare_ (Rome: Edizione dell' Ateneo, 1970), p. 64 writes that _uertere_ stands for artistic translation which has esthetic, not practical goals. Like Reiff, he tries to make a distinction among the words for translation which is not supported by ancient _testimonia_. The difference in their two views indicates how subjective are modern interpretations of the ancient evidence for translation.

[9]Another word which may be considered as representative of the process of Greek-to-Latin translation is _contaminare_. The only actual references to the word in a literary sense are found in the prologues to Terence's _Andria_ and _Heauton Timoroumenos_. Much debate has since ensued over the meaning of the word as it applies to Terence's method of composing comedies in Latin. For discussion of the problem, see W. Beare, "Contamination in Plautus and Terence", _RPh_, 14 (1940), p. 35; R. Waltz, "Contaminare chez Térence", _REL_, 16 (1938), p. 272; W. Ludwig, "The Originality of Terence and his Greek Models", _GRBS_, 9 (1968), p. 171; H. Marti, "Terenz 1909-59", _Lustrum_, 8 (1963), pp. 23-27; G.E. Duckworth, _The Nature of Roman Comedy_ (Princeton: Princeton University Press, 1952), pp. 202-208.

[10]Other multiple uses of translation words may be found in Cicero, _De Finibus_ 1.2.6; Aulus Gellius, _Noctes Atticae_ 9.9.1; St. Jerome, _Epistula_ 106.3.25ff.

[11]For other examples of _conuertere_ used in an interlingual sense see Cicero, _De Optimo Genere Oratorum_ 6.18; _Rhetorica ad Herennium_ 4.10; Seneca the Elder, _Suasoria_ 7.12.

[12]Reiff makes no distinction between _conuertere_ and _uertere_ and makes no provision for such an intralingual use of _conuertere_. He sees the word as synonymous with _exprimere_ (p. 39), _transferre_ (p. 27), and _imitari_ (p. 101).

[13] For a similar combination of _exprimere_ and _imago_ compare Vitruvius' discussion of wall painting in _De Architectura_ 7.5.2.

[14] Some other examples of the word _exprimere_ used in an interlingual sense can be found in Terence, _Adelphi_ 11; Cicero, _De Finibus_ 1.2.4, _Academica_ 2.10.31 and Pliny _Epistula_ 4.18.1. Traina, p. 58 believes that _exprimere_ is more often used with reference to literal translations, that is, to the faithful copying of the model. The evidence for the use of the word _exprimere_ in its artistic sense is abundant; see _Thesaurus Linguae Latinae_, V^2, 1787-1792. Literary translation and artistic copying at Rome bear some striking similarities. M. Bieber, _Ancient Copies: Contributions to the History of Greek and Roman Art_ (New York: New York University Press, 1977), p. 14 notes that the Romans became interested in Greek artists in the second century B.C.; this development corresponds with the growing interest of the Romans in Greek literature and the translations of Greek plays by Plautus and Terence. Bieber, p. 259 also points out that ancient artistic copying involved not only Greek but an increasing number of Roman sources. The same development is evident for Latin translations, and the works of Cicero, Germanicus and Avienus provide ample proof of this trend. For discussion of the translators' borrowing from each other, see Chapter VIII.

[15] D.A. Russell, "De Imitatione", in D. West and T. Woodman, eds., _Creative Imitation and Latin Literature_ (Cambridge: Cambridge University Press, 1979), pp. 1, 10, 16.

[16] Compare the lack of a concrete definition for imitation in the work Περὶ Μιμήσεως 3.28 by Dionysius of Halicarnassus. Longinus, _De Sublimitate_ 13.2-14.3 comments on imitation as a means to sublimity. His principles are not clearly defined, but Russell, p. 16 has formulated the main criteria of successful imitation as they were generally conceived, according to this author. For other modern views of this controversial concept see R. McKeon, "Literary Criticism and the Concept of Imitation in Antiquity", _Modern Philology_, 34 (1936), pp. 1-35, who notes four different, but related meanings for imitation; A. Guillemin, "L'imitation dans les littératures antiques et en particulier dans la Littérature Latine", _REL_, 2 (1924), p. 42, who writes "L'imitation n'est pas un fait qui a pu se présenter à certaines époques et se produire en certaines circonstances, il est le fluide même dans lequel ont baigné les littératures antiques . . .". M. Wigodsky, _Vergil and Early Latin Poetry_ (Wiesbaden: Franz Steiner Verlag, 1972), p. 5 defines imitation as the pious adknowledgement of tradition. He also (p. 8) distinguishes two types of imitation, structural and allusive imitation.

[17] For similar uses of _imitari_ in a literary interlingual sense see Cicero, _De Oratore_ 2.13.57; Macrobius, _Saturnalia_ 5.15.1.

[18] Another example of a similar combination can be found in Seneca, _De Tranquillitate Animi_ 2.3.

[19]B.L. Gildersleeve and G. Lodge, _Gildersleeve's Latin Grammar_, 3rd. ed. (London: Macmillan, 1895, repr. 1963), p. 300. The most common particle of connection is _et_. The enclitic -_que_, however, unites things that belong closely together and the second member completes the first (Section 476).

[20]For _imitari_ used in an intralingual sense, compare also Horace, _Epistula_ 1.19.19-23.

[21]Wigodsky, p. 2 and p. 2, n. 3 notes that the agonistic idea was important but that the importance of this competitive element has been exaggerated by some modern writers, perhaps as a surrogate for the romantic idea of originality.

[22]Similar uses of _aemulari_ and related words may be found in Horace, _Ode_ 4.2.1; Pliny, _Epistula_ 5.15.1; Quintilian, _Institutio Oratoria_ 10.1.50; Aulus Gellius, _Noctes Atticae_ 2.18.7; 2.23.3; Macrobius, _Saturnalia_ 5.13.40.

[23]Northrop Frye's comment quoted by A. Lefevere in _Translating Poetry: Seven Strategies and a Blueprint_ (Amsterdam: Van Gorcum, Assen, 1975), p. 17 is particularly appropriate to the Greco-Roman world: "Hence while every new poem is a new and unique creation, it is also a reshaping of the familiar conventions of Literature, otherwise it would not be recognisable as literature at all". Translation, therefore, may be seen as a specialized reshaping of previous literature. E. Stemplinger, _Das Plagiat in der griechischen Literatur_ (Leipzig and Berlin:Teubner, 1912), p. 210 comments that a translation, as a formal remodelling of the original, was a valued and praiseworthy work. Ludwig, p. 182 states that a kind of creativity was necessary for the translation itself.

[24]Some other examples of _aemulari_ and its cognates used in an intralingual sense may be found in Quintilian, _Institutio Oratoria_ 10.2.17; Martial, _Epigram_ 3.20.5 and Fronto, _Epistula ad M. Aurelium_ (Naber, p. 62).

[25]Compare A.L. Wheeler, _Catullus and the Traditions of Ancient Poetry_ (Berkeley: University of California Press, 1964), who states (p. 111) that translations range in extent from complete poems to short passages and lines, which are more imitation, and that (p. 114) translation is actually part of imitation, or in other words, poems or passages which are in general, imitations, often contain translations which are limited to a word or two, or to a line. The confusion is obvious. A.E. Wardman, _Rome's Debt to Greece_ (London: Paul Elek, 1976), p. 64 comments that literal translation is less highly thought of than imitation. E. Fantham, "Imitation and Decline: Rhetorical Theory and Practice in the First Century after Christ", _CPh_,73 (1978), p. 106 states that in translating a Greek model, the same content had to be transferred to the equivalent form in the language of the translation. Reiff, p. 7 writes that translation was the borrowing of form and content while imitation was a freer independent creation. D.L. Clark, _Rhetoric in Greco-Roman Education_ (New York: Columbia University Press, 1957) p. 174 calls emulation the more advanced imitative exercise.

[26]N. Horsfall, "Doctus Sermones Utriusque Linguae", EMC, 23 (1979), p. 84 emphasizes this point. The extent of bilingualism at Rome is an important question for translation, since it is important to know the degree of the translator's knowledge before judging the quality of the translation. Cicero had a good knowldege of the Greek language and he even declaimed in Greek (See Brutus 90.310 and Plutarch, Cicero 4). Extensive knowledge of the Greek language seems to have fallen off through the centuries as our final example of translations of the Phaenomena, the Aratus Latinus, indicates.

[27]D.E.W. Wormell, "Catullus as Translator", in L. Wallach, ed., The Classical Tradition: Literary and Historical Studies in Honor of Harry Caplan (Ithaca, N.Y.: Cornell University Press, 1966), p. 196 emphasizes this point, especially with reference to the neoteric poets.

[28]For the view that Latin was inferior to Greek as a mode of literary expression see also Lucretius, De Rerum Natura 1.831-832; 1.139; 3.260; Horace, Ars Poetica 323-324; Quintilian, Institutio Oratoria 12. 10.33-34; Aulus Gellius, Noctes Atticae 11.16.1.

[29]For other examples of the view that Latin was superior to or, at least, the equal of Greek in expression see Cicero, De Natura Deorum 1.4.8; Tusculanae Disputationes 2.15.35; De Senectute 45. See also H.F. Guite, "Cicero's Attitude Toward the Greeks", G & R, 9 (1962), p. 144.

[30]Other references by Cicero to his poetic achievements may be found in Cicero, Ad Atticum 2.1.11; De Finibus 1.1 (preface); De Divinatione 1.8.13; 2.5.14; De Legibus 2.7.17; De Republica 1.36.56. In addition, Cicero considered the translations of other Latin writers to be worthwhile literature; see De Finibus 1.2.5.

[31]U. von Wilamowitz-Moellendorf, "Die Locke der Berenike", in his Reden und Vorträge (Berlin: Weidmann, 1925), 224. Wilamowitz writes that when a poet limits himself to translation as Catullus did in Carmen 66, poetic power must have failed him for the moment. G. Williams, Tradition and Originality in Roman Poetry (Oxford: Clarendon Press, 1968), p. 251 espouses the same view when he states: "Simple translation is an activity that is likely to pall on a real poet". Neither author takes due account of the fact that the Romans themselves believed translation to be a creative literary endeavor.

[32]The taint of plagiarism was a concern to Latin authors. Compare, for example, Martial's scathing comments regarding the plagiarism of his own works by others in Epigrammata 1. 29, 38, 53, 66, 72. J.D. Denniston, "Plagiarism", Oxford Classical Dictionary, 2nd ed. (1970), p. 838 mistakenly writes: "The concept of plagiarism, as opposed to originality or imitation, has little relevance to Latin literature".

[33]Germanicus also makes reference to the author of the Phaenomena in line 1 of his poem: Ab Ioue principium magno deduxit Aratus.

[34]Instances of the reading of Latin poems with the Greek ones in mind are related in Noctes Atticae 9.9.4 and in Macrobius, Saturnalia 5.3.17.

[35]For a thorough study of plagiarism in the Greek world see Stemplinger, Das Plagiat.

[36]The terminology is that of Brock, p. 70. The opposition of the two concepts, however, is evident as early as Jerome, Epistula 57.5.

[37]See Norwood, p. 12 and p. 246, n. 2.

[38]Compare R.H. Martin, ed., Terence: Adelphoe (Cambridge: Cambridge University Press, 1976), p. 9.

[39]Compare Horace, Ars Poetica 133-134.

[40]Brock, p. 75 presents an interesting theory based on his study of Syriac translations from the Greek, that the distinction between sensus de sensu translation and uerbum de uerbo translation is basically tied to the attitude with which the translator approaches his source material. If the translator stands in awe of his model and fears to alter its content or form, he merely transfers the words of the model into their equivalents in his own language; this often makes for obscure translations which lack artistic value but possess an overwhelming faithfulness to the original. (The Aratus Latinus is one translation which betrays the translator's overwhelming respect for the model.) A sensus de sensu translator, on the other hand, feels no such awe since he feels that his own language is superior to the language of the model. As a result, he feels free to alter the content of the original in any way that is appropriate. (This attitude toward the model on the part of translators who rendered sense-for-sense would vindicate Cicero's belief that the Latin language was superior to the Greek, since in translating the Phaenomena according to principles of sensus de sensu Cicero proclaimed the superiority of his own language.)

[41]W. Schwartz, "The Meaning of fidus interpres in Medieval Translation", JThS, 45 (1944), p. 78 notes that the method of literal translation became the predominant, if not the only, method of translation during the Middle Ages. C.H. Haskins, Studies in the History of Mediaeval Science, 2nd ed. (Cambridge, Mass.: Harvard University Press, 1927), p. 150 states that twelfth century translations were so literal as to suggest the efforts of a stumbling and conscientious schoolboy. Brock, p. 69 comments that the term fidus interpres refers to the slavish translation of legal and business documents.

[42]D.C. Lindberg, "The Transmission of Greek and Arabic Learning to the West" in D.C. Lindberg, ed., Science in the Middle Ages (Chicago: University of Chicago Press, 1978), p. 78 indicates, however, that not all mediaeval translations were of the uerbum de uerbo type; Hugh of Santalla, for example, was an exceptional stylist and made no attempt to ad-

here strictly to the original. Lindberg, p. 90, n. 2 also adds that
word-for-word translation was safer. Mediaeval translators often
lacked the self-confidence to free themselves from the syntax of the
original.

III.

METRE

Having placed the four Latin translations of Aratus' Phaenomena
in the context of literary translation at Rome, we may now examine the
works in greater detail in order to discover how they compare with one
another and with the original. Metre, the first area to be discussed, is
an inherent part of Greek and Latin poetry and is equally important for
the appreciation and critical understanding of poetry in translation,
since, as testimonia from the previous chapter have shown, the art of
translation is little different from the writing of original poetry. In the
comparative examination of metrical features found in the Phaenomena and
the three verse translations which follows, the first four sections deal
with statistics prepared for important areas of metrical variety, namely,
metrical patterns, first and fourth foot, elisions, and caesurae and diae-
reses. The final section, which investigates the relationship between
metre and translation, provides examples of the application of the sta-
tistics found in these earlier portions.[1]

The figures presented in the first five sections are based on
scansion of the texts; the statistical information found in the various
tables is only intended to be observational and specific to the Phaeno-
mena and the translations.[2] General statistical inference has not been
attempted since this would be less valid unless data from all
Latin hexameter poetry or all astronomical poetry or all Greek-to-

74

Latin verse translations were to be considered in conjunction with the
four poems under discussion here. A comparative study of metre for the
Latin works and the Greek original has not been undertaken previously, and
the purpose of this study, therefore, is to outline a methodology which
has proven useful for the investigation of translations where the model
is extant and to establish the metrical norms in these four hexameter
poems.

1. Metrical Patterns

We may define the metrical pattern of a hexameter line as the
sequence of dactyls and spondees, and although it is possible to examine
the dactylic hexameter in a number of ways, investigation in this sec-
tion will involve only the first four feet, for which sixteen patterns
of dactyl-spondee combinations exist.[3] In order to maintain the distinc-
tion between the initial Phaenomena portion of the poems and the con-
cluding Prognostica section and to allow accurate norms to emerge,
separate tables have been prepared. In the interest of simplicity,
shorthand notation will serve to identify the poems in the following way:
APh stands for the Phaenomena portion of Aratus' poem, while APr signi-
fies the Prognostica or Διοσημεῖαι portion. CPh is used for Cicero's
translation of the Phaenomena part of Aratus' poem and CPr for the sur-
viving fragments of his translation of the Prognostica portion of the
Greek original. GPh designates the Phaenomena segment of Germanicus'
translation and GFr represents the second half of Germanicus' transla-
tion which is fragmentary and not strictly a translation of the Prognos-
tica portion of Aratus' poem. AvPh is used for Avienus' translation of the

Phaenomena part of the Greek original and AvPr for the Prognostica por-
tion. All spondaic lines in the Latin translations have been disregarded
but spondaic lines in Aratus' poem have been included because they are
so numerous. In addition, corrupt lines from all the poems have been
omitted in the preparation of the statistical tables; a list of corrupt
lines may be found in Table C at the end of this chapter.

The following table provides information on metrical patterns for
the first sections of the four poems. The table first presents figures for
the eight most frequently used patterns. The second section shows the to-
tal percentages of the four most commonly employed metrical patterns and
the third gives the total percentage for the eight most frequently used pat-
terns found in the first section. The fourth section of the table contains
the number of dactyls and spondees derived from a count of dactyls and spon-
dees found in the first eight patterns. A complete statistical survey may
be found at the end of this chapter (Tables A-B).

TABLE I

APh		CPh		GPh		AvPh	
DDDD	23.2%	DSSS	16.9%	DSSS	16.3%	DSSS	12.7%
SDDD	16.0%	DDSS	13.5%	DDSS	12.8%	DSSD	10.9%
DSDD	15.5%	SSSS	13.5%	SDSS	11.3%	DDSS	9.7%
SSDD	10.4%	SDSS	12.8%	DSDS	9.2%	DSDS	9.5%
DDSD	6.6%	SDDS	7.0%	SSSS	7.6%	DDSD	7.4%
DSSD	5.1%	SSDS	6.7%	SSDS	6.0%	DSDD	6.7%
DDDS	5.1%	DSDS	5.9%	SDSD	5.4%	SDSS	5.9%
DSDS	4.7%	DDDS	5.7%	DSSD	5.1%	SDDS	5.9%
%1st Four	65.1%		56.7%		49.6%		42.8%
%1st Eight	86.6%		82.0%		73.7%		68.7%
Dactyls	22		12		11		16
Spondees	10		20		21		16

Statistics for the Phaenomena and the translations support the generaliza-
tion that a preponderance of dactyls over spondees is Greek in nature,
while a larger number of spondees as compared to dactyls is characteris-
tic of the Latin hexameter.[4] In APh the ratio of dactyls to spondees is
22 to 10, but in CPh the ratio is 12 to 20 and in GPh it is 11 to 21. AvPh
more nearly approaches the Greek norm as exhibited by APh since it dis-
plays a ratio of 16 dactyls to 16 spondees.[5]

The table also indicates that DDDD, one of the most commonly em-
ployed patterns in the Greek hexameter, is found with the greatest fre-
quency in APh.[6] In agreement with many other Latin works, however,
the metrical pattern DSSS, which Cicero first made a favorite among the
Republican poets, is the most frequently used pattern in CPh, GPh and AvPh.[7]
The Latin poems employ DSSS less often than APh uses its favored pattern,
DDDD, and the use of DSSS exhibits a noticeable decrease from CPh to AvPh.
The same decrease is found in totals for the first four and first eight
patterns.

In addition, if CPh is used for comparison, GPh can be said to pos-
sess only six of the eight patterns most commonly found in CPh. AvPh, in
comparison, contains only five of the eight most frequently used metrical
patterns found in CPh. The use of different metrical patterns among the
first eight patterns in the translations is therefore an indication that
variety and choice were possible and, perhaps, desirable.

Finally, we may compare APh with CPh, GPh and AvPh in order to de-
termine whether the Latin translations were influenced in the use of par-
ticular metrical patterns by the Greek original. The following table indi-
cates the prominence held in the poems by shared metrical patterns.

TABLE II

	APh	CPh	GPh	AvPh
DSDD	3rd			6th
DDSD	5th			5th
DSSD	6th		8th	2nd
DDDS	7th	8th		
DSDS	8th	7th	4th	4th

Shared metrical patterns are found relatively infrequently, and statiscics indicate, therefore, that metrical patterns were not used in general in the translations with the intention of imitating the Greek metrical patterns.

The _Prognostica_ portions of the poems provide further information about metrical patterns and the following table presents statistics which may be compared with those found in Table I.

TABLE III

APr		CPr		GFr		AvPr	
DDDD	18.7%	SDSS	18.5%	DSSS	16.4%	DSSS	15.1%
DSDD	17.3%	DDSS	18.5%	DDSS	13.7%	DSSD	10.4%
SDDD	12.8%	DSSS	11.1%	DSSD	9.1%	DDSS	9.3%
SSDD	8.3%	DDDS	11.1%	DDDS	8.2%	DSDS	8.7%
DDSD	7.6%	DSDS	7.4%	DDSD	7.8%	SDSS	8.0%
DSSD	7.1%	SDDS	7.4%	SDSS	7.8%	SSSS	7.6%
DDDS	6.6%	SDDD	7.4%	DSDS	6.8%	DDSD	6.9%
DSDS	5.2%	DDDD SSSS SSDS SSSD SSDD	3.7%	SSDS	5.5%	SDSD	5.6%

%1st Four	57.1%	59.2%	47.4%	43.5%
%1st Eight	83.6%	85.1%	75.3%	71.6%
Dactyls	22	15.6	15	13
Spondees	10	16.4	17	19

In APr, the ratio of dactyls to spondees is 22 to 10, which is identi-
cal with the ratio for dactyls and spondees found in APh. CPr, by com-
parison, has a ratio of 15.6 dactyls to 16.4 spondees, a ratio which more
closely approximates the Greek ratio, but which may be due to the frag-
mentary state of CPr itself.[8] AvPr has a ratio of 13 dactyls to 19 spon-
dees, which, in contrast to the ratio found for APh, is more in keeping with
the Latin emphasis on spondees.

In APr, as in APh, the most commonly employed metrical pattern is
DDDD. CPr and AvPr, however, show some variation in the most frequently
used pattern, since CPr favors SDSS while AvPr favors DSSS. In this case,
CPr has deviated from the normal emphasis on the metrical pattern DSSS,
but again, the variation may be due to its fragmentary state. Nevertheless,
CPr and AvPr exhibit similar decreases in frequencies for the most com-
mon pattern and the total percentages for the first four and first eight
patterns as CPh, GPh and AvPh.[9]

In addition, the presence of different metrical patterns in the two
halves of each author's poem is indicative of distinctive practices. APh
and APr, for example, use identical first eight patterns, while CPr con-
tains all the same patterns as CPh with the addition of SDDD, DDDD, SSSD
and SSDD. In GFr, the metrical patterns DDDS and DDSD replace the patterns,
SSSS and SDSD which are found in GPh. AvPr makes use of SSSS and SDSD to
replace the patterns DSDD and SDDS which are present in AvPh. Again, it
is obvious that the Latin translators have handled the two individual halves
of their poems with greater flexibility than Aratus.

Further comparison of the first eight patterns used by CPr and AvPr
shows that of the twelve patterns found in the first eight positions in

CPr, Avienus uses only five. This tendency on the part of Avienus not to use the same metrical patterns as Cicero in either portion of his poem may be due to a conscious effort on the part of Avienus to make his own translation metrically different from that of his predecessor. But a general evolution of preference for certain metrical patterns is not evident for the Latin hexameter.[10]

Finally, in order to determine whether the Latin translations were influenced by the Greek original in the use of metrical patterns in their Prognostica portions, we may examine shared metrical patterns and their relative prominence.

TABLE IV

	APr	CPr	AvPr
DDDD	1st	8th	
SDDD	3rd	7th	
SSDD	4th	8th	
DDSD	5th		7th
DSSD	6th		2nd
DDDS	7th	4th	
DSDS	8th	5th	4th

The preponderance of shared patterns found in APr and CPr must be due to the fragmentary state of CPr since APh and CPh exhibit little correspondence and APh and AvPh resemble APr and AvPr in emphasis. Statistical information suggests therefore that, in general, the metrical patterning of the Greek original had only a small influence upon the Prognostica portions of the Latin translations. A similar absence of influence was deduced above for the Phaenomena segments of the poems.

2. First and Fourth Foot

Further variations in the handling of the hexameter line are evi-

dent in the first and fourth foot, and the following table provides information on the constitution of the first foot as compared to the fourth foot in each of the four poems. Statistics presented in this section are based on all lines except corrupt or incomplete ones.

TABLE V

First Foot

	APh	CPh	GPh	AvPh
Total dactyls	444	269	420	887
Frequency	60.8%	49.6%	58.0%	67.0%
Total spondees	286	273	304	437
Frequency	39.2%	50.4%	42.0%	33.0%

Fourth Foot

	APh	CPh	GPh	AvPh
Total dactyls	601	98	207	597
Frequency	82.3%	18.1%	28.6%	45.1%
Total spondees	129	444	517	727
Frequency	17.7%	81.9%	71.4%	54.9%

First Foot

	APr	CPr	GFr	AvPr
Total dactyls	271	14	156	347
Frequency	64.2%	51.9%	70.9%	62.7%
Total spondees	151	13	64	206
Frequency	35.8%	48.1%	29.0%	37.3%

Fourth Foot

	APr	CPr	GFr	AvPr
Total dactyls	326	5	74	207
Frequency	77.3%	18.5%	33.6%	37.4%
Total spondees	96	22	146	346
Frequency	22.7%	81.5%	66.4%	62.6%

Statistics for the Latin translations show that GPh, AvPh, GFr and AvPr all demonstrate a marked preponderance of dactyls over spondees in the

first foot, a practice which compares favorably with that evident in both

APh and APr.[11] In CPh and CPr, however, the total frequency for dactyls

in the first foot is very close to the frequency for spondees. This re-

sult stands in contrast to a general preference among later Latin poets

to begin a hexameter line with a dactyl in order to support the original

dactylic character of the hexameter line.[12] Cicero's difference of ap-

proach may be attributed simply to the poetic environment in which he

was writing his poem, where the Latin hexameter was more spondaic or

"heavier". But perhaps we may also suggest (although this cannot be proven)

that Cicero wished to maintain the old "heavier" hexameter as more suitable

for his translation of Aratus' Phaenomena.[13]

All of the Latin translations are consistent in their emphasis

on the use of spondees in the fourth foot, but in AvPh the ratio of dac-

tyls to spondees (45.1% dactyls to 54.9% spondees) more closely approxi-

mates the Greek ratio.[14] Since the use of spondees in the fourth foot

in the translations declines in frequency from Cicero to Avienus, we

may attribute the variation in approach in AvPh either to personal taste

or to the general development of the hexameter toward a more dactylic

character. The treatment of dactyls and spondees in the fourth foot in both

APh and APr, moreover, may be contrasted with that in the Latin transla-

tions, for in both portions of the Greek poem, the frequency for dactyls

in the fourth foot is greater. The Latin translations, with the exception

of AvPh, therefore, do not appear to have been influenced by the original

in the handling of the fourth foot.

3. Elision

By definiton, elision is the slurring of a vowel, diphthong or

a vowel plus final m which ends a word, before a vowel or diphthong alone
or with initial h which begins the following word.[15] The following ta-
ble provides statistics taken from complete tables (D-G) which can be
found at the end of this chapter for both the Phaenomena and Prognosti-
ca portions of the poems. Information is provided below on the total
number of lines which show elision in one or more feet, on the frequency
of single elisions in the six individual feet in the hexameter line, on
the foot in which an elision most commonly falls and on how often an
elision occurs in the poems. Spondaic lines have been included and sta-
tistics are based, therefore, on all lines in the texts except corrupt
or incomplete ones.

TABLE VI

	APh	CPh	GPh	AvPh
Total	294	146	166	339
Frequency	40.3%	26.9%	22.9%	25.6%
Frequency of single elisions in feet 1-6	35.2%	23.2%	19.2%	23.6%
Most common foot	4	2	2	2
Frequency	9.3%	7.7%	7.5%	7.0%
elision, one every x lines	2.5	3.7	4.1	3.9

	APr	CPr	GFr	AvPr
Total	171	4	43	106
Frequency	40.5%	14.8%	19.5%	19.2%
Frequency of single elisions in feet 1-6	35.3%	14.8%	18.6%	17.9%
Most common foot	4	1, 4	2	1, 2
Frequency	10.0%	7.4%	7.3%	4.9%
elision, one every x lines	2.5	6.8	5.1	5.3

In the poems, _APh_ and _APr_ have the highest frequencies for elisions in general, as well as the highest frequencies for single elisions in the six feet. In both _APh_ and _APr_, an elision occurs once every 2.5 lines and the greatest number of elisions is found in the fourth foot.

The one notable similarity between the Greek original and the Latin translations is that for all four poems, the greatest number of elisions are single elisions occurring in one foot of the line. The Latin translations also share the use of some of the rarer combinations, such as elisions in both the second and fourth foot in a line and elisions in both the second and fifth foot in a line, although these combinations are more numerous in the Greek poem than in the Latin ones. But in contrast to the Greek model, the Latin translations have lower total frequencies for elisions and lower frequencies for single elisions occurring in one foot of a line. This result places the translations generally in agreement with other Latin poems from the first century B.C. and first century A.D.[16]

An elision occurs approximately once every 4 lines in _CPh_, _GPh_ and _AvPh_, about half as frequently as in _APh_. In addition, _CPr_ and _AvPr_ demonstrate even less frequent use of elisions than _CPh_, _AvPh_ and, of course, _APr_. The translations also show a marked preference for elision in the second foot while _APh_ uses most commonly an elision in the fourth foot. In _APr_, the same emphasis on elisions in the fourth foot is evident, but in _CPr_ a preference for elisions in the first and fourth foot is found, while in _AvPr_ an emphasis on the first and second foot is indicated. The notable use of elisions in the fourth foot in _CPr_ is most likely due to the fragmentary condition of _CPr_, but the additional em-

phasis on the first foot in <u>AvPr</u> in contrast to <u>AvPh</u>, is a varia-
tion which is independent of the previous translations, excepting <u>CPr</u>,
and the Greek original. Elisions are found less frequently in the <u>Prog-
nostica</u> segments of the translations than in the <u>Phaenomena</u> portions, a
fact which indicates that the usage of elisions may vary even within the
works themselves.

4. Caesurae and Diaereses

Caesurae and diaereses have been defined in various ways,[17] but
for the purpose of this discussion, caesurae will designate points in
the hexameter line where word end and foot do not coincide and diaereses
will indicate those points which demonstrate coincidence between word end
and foot. Caesurae and diaereses are integral parts of the hexameter line
and, as such, they invite and demand study in connection with Latin trans-
lation. The principal caesurae which have been investigated are the
trithemimeral, the penthemimeral, the third foot trochaic and the hepthe-
mimeral. These will be noted respectively as 3, 5, $5\frac{1}{2}$ and 7 according to
the system which divides a dactylic hexameter line into twelve half feet.
The most important diaereses, those at the end of the first foot and at
the end of the fourth foot, will be noted in the discussion as 1 and 4.[18]
The presence of 1, the initial diaeresis, is of particular importance for
the Latin translations, but it has also been calculated for the Aratus'
<u>Phaenomena</u> in the interest of statistical uniformity. These selected cae-
surae and diaereses have been considered as purely mechanical devices with-
out any reference to the sense of the words in the line. Such a distinction
is artificial, to be sure, but necessary for an objective investigation.

The following table presents information chosen from the complete statistical data on caesurae and diaereses in the _Phaenomena_ segments of the four poems, found at the end of this chapter (Tables H-O). Figures are presented below for the most frequently used caesura or combination, the least commonly used caesura or combination, the most commonly employed diaeresis or diaeresis combination, the least frequently used diaeresis or diaeresis combination and the most commonly found caesura-diaeresis combination. Percentages are given for each category and percentages for the 5 caesura as compared to the 5½ caesura as well as for the bucolic diaeresis (4) as compared to the initial diaeresis (1) are also present. In this section, spondaic lines in all four poems have been included in the statistics, but all corrupt or incomplete lines have been omitted. Apparent natural breaks within words such as those before -_que_ or after initial prepositions have not been considered as caesurae or diaereses[19] and so-called "apparent caesurae" in any foot, that is, caesurae which would fall after a final elided syllable if that syllable were not elided, have also been omitted from the discussion.[20]

Statistics in Table VII, which can be found on the following page, provide a clear indication of similarities and differences in the treatment of caesurae and diaereses in the _Phaenomena_ portions of the poems. The most commonly employed caesura combination in _APh_, for example, is 3-5½ , while the most common caesura combination in _CPh_ and _GPh_ is 3-5-7 and the most common in _AvPh_ is 5-7. The least frequently employed caesura in _APh_, by comparison, is 7, and the majority of least frequently used caesura combinations in the Latin translations contain a 5½ caesura.

TABLE VII

	APh	CPh	GPh	AvPh
Most frequent caesura (combination)	3-5½	3-5-7	3-5-7	5-7
Frequency	17.4%	29.2%	27.3%	26.4%
Least frequent caesura (combination)	3	3-5½-7 3-5-5½	5½	5½,3-5-5½-7 3-5-5½,5-5½-7
Frequency	0.1%	0.2%	0.1%	0.1%
Frequency (5)	58.2%	88.6%	86.6%	92.2%
Frequency (5½)	53.8%	3.3%	8.6%	6.2%
Most frequent diaeresis (combination)	1-4	4	4	4
Frequency	34.7%	43.2%	33.7%	35.0%
Least frequent diaeresis (combination)	0	1	1	1
Frequency	17.5%	12.2%	14.4%	14.8%
Frequency (4)	59.7%	66.8%	60.2%	67.5%
Frequency (1)	57.4%	36.0%	48.1%	47.4%
Most frequent caesura-diaeresis combination	5-1-4 5-7-1	3-5-4	3-5-7-0	5-1-4
Frequency	5.8%	18.4%	12.3%	13.3%

Investigation of the 5½ caesura in the Greek and Latin poems provides one

of the best indications of normal metrical behavior, for the 5½ caesura

is generally rare in the Latin, but common in the Greek hexameter.[21]

The presence of the 5½ caesura in CPh, however, is even more infrequent

than the rare occurrence of the 5½ caesura in Latin poetry in general.

It occurs with a frequency of only 3.3% and can be compared with the oc-
currence of the 5 caesura in CPh which has a frequency of 88.6%.[22] By
comparison, the 5½ caesura is found in 8.6% of lines in GPh and the 5
caesura with a frequency of 86.6%. The figure discovered for the 5½
caesura in GPh is more than twice as great as that found for CPh and,
therefore, it is much closer to figures found for other Latin authors.[23]
The ratio of 5½ caesura to 5 caesura is, however, slightly different in
AvPh where the frequency for 5½ caesura is 6.2% and that for 5 caesura
is 92.2%. The figure for 5½ caesura in AvPh is approximately twice as
great as that of CPh; less than that found for GPh, it is nevertheless
in agreement with other Latin works. Comparison of the treatment of 5½
caesurae in the poems indicates, therefore, that although none of the
translations approaches the frequency for the 5½ caesura found in APh,
53.8%, GPh exhibits the greatest use of this caesura, while CPh, with a
very low frequency of use, does not employ the 5½ caesura as a means
of conveying a "Greek tone" to the verses.[24]

The Latin translations and the Greek original, furthermore, show
no similarities in the handling of the most frequently used diaeresis
combination; all the translations share the same diaeresis, 4, while
APh uses 1-4 most frequently. With regard to the least frequently em-
ployed diaeresis, all three Latin translations are also in agreement in
their lack of emphasis on 1. A line without a diaeresis is least common
in APh. Comparison of the percentages of total bucolic (4) and total
initial diaereses (1) provides an additional indication of the distinc-
tive features of the Latin and Greek hexameter. In APh, the frequency
for 4 and 1 are almost identical (59.7% and 57.4%), but in the Latin

translations the total frequency for 4 is consistently higher than the
percentage for 1, a result which may be favorably compared with statis-
tics discovered for other Latin works.[25] Finally, the statistics for
the most frequently used caesura-diaeresis combination show some varia-
tions; 3-5-4 is favored in CPh, 3-5-7-0 in GPh and 5-1-4 in AvPh. Each
of these combinations corresponds broadly in frequency but stands in con-
trast to the frequency discovered for the most commonly employed caesura-
diaeresis combination in APh. AvPh and APh, however, share the same fa-
vored caesura-diaeresis combination, 5-1-4. This similar usage may be
simply a fortuitous occurrence, or it may indicate that Avienus trans-
lated the effect of the 5-1-4 combination in a number of his own lines.

The Prognostica portions of the four poems also provide statis-
tics for comparison, and Table VIII on the following page presents infor-
mation which may also be compared with that found in Table VII. APr and
APh make use of the same most commonly employed caesura combination, $3-5\frac{1}{2}$,
and both CPr and CPh, GFr and GPh use the caesura combination 3-5-7 with
the greatest frequency. AvPr, in contrast, displays a different approach,
for the caesura, 5, is used most commonly; this usage may be compared
with the emphasis on the caesura combination, 5-7, in AvPh. The Latin
translations in the Prognostica portions again show a general deemphasis
on caesura combinations containing a $5\frac{1}{2}$ caesura.

The proportion of $5\frac{1}{2}$ to 5 caesura in APr closely resembles that
discovered for APh, but some variation is found in the Latin translations.
Although each of the Latin Prognostica segments demonstrates a strong em-
phasis on the 5 caesura at the expense of the $5\frac{1}{2}$ caesura, comparison of
the individual halves shows a higher percentage for $5\frac{1}{2}$ in CPr as compared

TABLE VIII

	APr	CPr	GFr	AvPr
Most frequent caesura (combination)	$3-5\frac{1}{2}$	3-5-7	3-5-7	5
Frequency	21.3%	37.0%	30.5%	31.9%
Least frequent caesura (combination)	3-7	7, $3-5\frac{1}{2}-7$	3, 7, $5\frac{1}{2}-7$, $3-5-5\frac{1}{2}-7$	3, $5-5\frac{1}{2}$
Frequency	0.2%	3.7%	0.5%	0.2%
Frequency (5)	54.5%	85.2%	97.3%	95.8%
Frequency ($5\frac{1}{2}$)	53.8%	11.1%	5.9%	3.6%
Most frequent diaeresis (combination)	4	4	4	4
Frequency	27.0%	51.9%	37.7%	38.0%
Least frequent diaeresis (combination)	1	1	1	1
Frequency	22.7%	3.7%	18.6%	12.5%
Frequency (4)	52.6%	70.4%	61.4%	72.1%
Frequency (1)	48.3%	22.2%	56.4%	46.6%
Most frequent caesura-diaeresis combination	$3-5\frac{1}{2}-0$	3-5-7-0	3-5-4	5-1-4
Frequency	7.3%	22.2%	12.7%	17.2%

to CPh, a lower percentage for 5½ in GFr as compared to GPh and a lower
percentage for 5½ in AvPr as opposed to AvPh. Caution must be applied
in the interpretation of the result discovered for the fragmentary CPr,
but the decrease in frequency for the 5½ caesura in the second half of
the poems of Germanicus and Avienus seems to imply a different emphasis
upon the 5½ caesura and, perhaps, as a result, less of a Greek effect
in the Prognostica segments of these poems.

Two areas of correspondence among the Prognostica portions of
the poems, however, are the categories of most frequent and least fre-
quent diaeresis combinations. APr, CPr and AvPr all employ the 4 diae-
resis most frequently and the 1 diaeresis with least emphasis. The most
common and least common diaereses for CPr and CPh and for AvPr and AvPh
are identical, but APr emphasizes the 4 diaeresis instead of the 1-4
diaeresis combination and APr least favors the 1 diaeresis instead of
lines with no diaeresis at all. Frequencies for total bucolic and total
initial diaereses in the Prognostica sections bear some similarity to
figures found for the Phaenomena sections. In APr, the frequencies for
4 and 1 are again nearly equal and again the frequency for 4 is greater
than that discovered for 1. The gap between 4 and 1 in CPr is greater
than that found for CPh, a fact which may be the result of the fragmen-
tary nature of CPr, but figures for 4 and 1 in AvPr and AvPh are similar.
Finally, the category of most frequently employed caesura-diaeresis com-
bination demonstrates some degree of variety since neither APr nor CPr
use the same combinations as APh or CPh. AvPr and AvPh, however, share
the use of the combination 5-1-4. These results are indicative of the
general independence of the translations from the Greek model in the

in the matter of caesurae and diaereses, the differences in treatment in
the translations and the possibility of both variety and similarity with-
in the two halves of the individual Latin poems.

In conclusion, statistics for metrical patterns, first and fourth
foot, elision, and caesura and diaeresis demonstrate that the Latin trans-
lators were not influenced on a wide scale by the metrical features of
the Greek original in their own Latin works. With few exceptions, the
metre of the Latin translations remains statistically close to the norms
evident for Latin poetry in general and does not provide extensive
evidence of the translation of certain metrical features peculiar to the
Greek hexameter, an occurrence which might be expected in the Latin trans-
lations of a Greek work, but which is only obvious upon closer investiga-
tion of the poems in a non-statistical way.

5. Metre and Translation

Supporting evidence for the hypothesis that the Latin verse trans-
lations carried over certain metrical features from the original can be
gathered from an examination of individual corresponding lines from the
Greek and Latin poems. Metrical influence is present in translated lines
which resemble the original in the use of common elisions in the same
foot[26], both the same metrical pattern and a 5½ caesura, a common metri-
cal pattern, a common 5½ caesura and the 5½ caesura employed for a Greek
effect in a translated line in spite of the fact that this caesura is ab-
sent from the model line. Corresponding lines from the Phaenomena and
the translations have been categorized as lines which are very similar

in content (see Appendix II - Parallel Passages). Because of the <u>sensus</u> <u>de sensu</u> nature of the three verse translations, this correspondence may vary from line to line. Some verses are partially in agreement in terms of content; <u>APh</u> 546: Παρθένος, αἱ δ'ἐπί οἱ Χηλαὶ καὶ Σκορπιός αὐτός, for example, can be compared with <u>CPh</u> 322: <u>quem rutilo sequitur conlucens</u> <u>corpore Virgo</u>, although the reference to Chelae and Scorpio comes in the following line, <u>CPh</u> 323. Other lines are almost in exact agreement in content; accordingly, <u>APh</u> 281: λαιῆι δὲ πτέρυγι σκαρθμὸς παρακέκλιται "Ιππου is comparable to <u>GPh</u> 283: <u>at laeua fugit instantem sibi Pegason</u> <u>ala</u>. All corrupt or incomplete lines have been omitted from the investigation, in keeping with previous sections, and many examples are presented below, in support of a hypothesis which has never before been suggested for this group of poems.

Five examples in which parallel lines correspond in the use of the same metrical patterns and a common 5½ caesura can be found in the <u>Phaenomena</u> and the Latin translations. <u>APh</u> 152, from the passage which discusses the constellations Gemini, Cancer and Leo: τῆμος καὶ κελάδοντες ἐτησίαι εὐρέι πόντωι may be compared with <u>CPh</u> XXIII: <u>Hoc motu radiantis</u> <u>etesiae in uada ponti</u>. Both are similar in the common use of the metrical pattern <u>SDDD</u> and in the use of the 5½ caesura, which in <u>APh</u> falls after the word κελάδοντες and in <u>CPh</u> falls after <u>etesiae</u>. Examination of the content of the two lines shows that the line from <u>CPh</u> is a close translation of <u>APh</u> 152 and the word <u>radiantis</u> in <u>CPh</u> XXIII used in reference to the sun, is a translation of the words ἠελίου . . . συνερχομένοιο from the previous line.[27] Hiatus also appears in the fourth foot of each line.

A second example of the combined use of a common metrical pattern

and a 5½ caesura is evident in APh 345: νῆες, ὅτ' ἤδη ναῦται ἐπιστρέψωσι κορώνην and in CPh 128: non aliae naues ut in alto ponere proras. These lines which contain a description of the constellation Argo are comparable in the use of the pattern DSDS. In addition, each has a 5½ caesura, in APh 345, after the word ναῦται and, in CPh 128, after the word ut. CPh 128 is also notable because it contains both a 5 and 5½ caesura together. Such a combination is common in the Phaenomena, but infrequently used in the Latin translations.[28]

A third instance of correspondence can be found in APh 282: τὸν δὲ μετασκαίροντε δυ' 'Ιχθύες ἀμφινέμονται which is comparable to GPh 284: Piscibus interlucet Equi latus ad caput eius. These lines, located in the passage of the poem which describes the constellations Aquarius and Capricorn, use the metrical pattern DSDD and a common 5½ caesura. In APh 282, the 5½ caesura is found after the word μετασκαίροντε and in GPh 284 it is found after the word interlucet. The Greek equivalent for Equi is found in APh 283, and although Germanicus has condensed the two lines from APh into one, the verse in GPh may still be counted as a close translation of the corresponding lines from the original.

A fourth example may be seen in APh 199, a discussion of the constellation Andromeda: νύκτα περισκέψασθαι, ἵν' αὐτίκα μᾶλλον ἴδηαι and in AvPh 461: sponte oculos in membra rapit. face denique uertex. Each of these two verses shares the use of the metrical pattern DSDD and each has a 5½ caesura, in APh 199, after περισκέψασθαι and, in AvPh 461, after membra. AvPh 461 has altered the emphasis on the second person which is present in APh, and the reference to uertex in AvPh 461 is a translation of the word κεφαλή which is found in APh 200.

A final example is found in <u>APh</u> 262-263:

'Αλκυόνη Μερόπη τε Κελαινώ τ''Ελέκτρη τε
καὶ Στερόπη καὶ Τηΰγέτη καὶ πότνια Μαῖα.

which may be compared with <u>CPh</u> 35-36:

Alcyone Meropeque Celaeno Taygeteque
Electra Asteropeque, simul sanctissima Maia.

These two passages, which discuss the Pleiades, are closely related be-
cause of their almost exclusive use of the same Greek proper names and,
furthermore, both <u>APh</u> 262 and <u>CPh</u> 35 share the use of the metrical pat-
tern <u>DDDS</u> and a 5½ caesura. In both lines a 5½ caesura is present after
a word meaning "and", in <u>APh</u>, after τε and, in <u>CPh</u>, after <u>Meropeque</u>.
<u>APh</u> 262-263 may also be compared with <u>AvPh</u> 580-581:

Electra Alcyoneque Celaeno Taygeteque
et Sterope Meropeque simul famosaque Maia

in which both <u>AvPh</u> 580 and <u>AvPh</u> 581 have a 5½ caesura, and in which <u>AvPh</u>
581 agrees with <u>APh</u> 262 in a common use of the metrical pattern <u>DDDS</u>.
Further evidence of the deliberate nature of the translation of these me-
trical features can be seen in the corresponding <u>GPh</u> 262-263:

Electra Alcyoneque Celaenoque Meropeque
Asteropeque et Taygete et Maia parente

Although <u>GPh</u> 262 has a 5½ caesura, neither of the two lines from <u>GPh</u> agree
with <u>APh</u> 262-263 in the use of a common metrical pattern. The difference
in the treatment of these two lines which are limited to a presentation
of the seven names is indicative of individual choices to follow or not
to follow the Greek model.[29]

Agreement in the use of the same metrical pattern is evident
in lines from two of the translations. The previously mentioned <u>APh</u> 152:
τῆμοs καὶ κελάδοντες ἐτησίαι εὐρέι πόντωι may be compared with <u>CPh</u> XXIII:

Hoc motu radiantis etesiae in uada ponti and with AvPh 401: tunc et

Threicii repetunt animosa aquilones. Unlike APh and CPh, AvPh refers to

the northerly Etesian winds as Threicii aquilones, but each of the three

lines uses the same metrical pattern, SDDD. APh 546: Παρθένος αἱ δ᾽ἐπί

οἱ Χηλαὶ καὶ Σκορπίος αὐτός, from a discussion of the zodiac, can be com-

pared with CPh 322: quem rutilo sequitur conlucens corpore Virgo and with

AvPh 1047: brachia sunt itidem chelarum et scorpius ipse. The line in

Cicero's poem omits a reference to Chelae and Scorpio, but the line in

AvPh lacks only a reference to Virgo, which can be found at the end of

the preceding line, AvPh 1046. Each of these lines share the use of the

metrical pattern DDSS.

A third example of the common use of metrical patterns in the

Phaenomena and two of the translations is found for APh 556: τόσσαι δ᾽

ἀντέλλουσι᾽ τόσον δ᾽ἐπὶ μῆκος ἑκάστη which is also found in a discussion

of the zodiac. This line is comparable to CPh 337: tot caelum rursus

fugientia signa reuisunt and to AvPh 1056: tantum telluris super eminet.

omnibus iste. Each of these three lines agrees in the employment of the

metrical pattern SSDD, a pattern which is used less frequently in the

translations than in the original work of Aratus. Finally, APh 640:

θήρης ἀρνύμενος κείνωι χάριν Οἰνοπίωνι, from the passage naming those con-

stellations rising and setting with Scorpio and which in particular, tells

the story of Orion, may be compared with GPh 652: pacatamque Chion dono

dabat Oenopioni and with AvPh 1183: audax ut facinus donum foret Oeno-

pioni. Each of these lines corresponds with the others both in content

and in the common use of the metrical pattern SDSD.

Comparison of individual lines from the Latin translations also

shows that there is sometimes agreement in the common use of a metrical pattern found in the original of Aratus. The importance of metrically parallel lines in analysis of the hexameters of the translations is illustrated by the fact that lines with corresponding metrical patterns constitute only about 3% of the total number of lines in each of the translations. Such lines, therefore, are important because of their unusual nature. The following passages, chosen from the sixteen examples of such correspondence, further suggest that Cicero was influenced, in some places, by the metre of the Greek poem:[30]

DSDS

APh 85: Σκορπίον, ὀφθαλμοῖς τε καὶ ἐν θώρηκι βεβηκώς,

CPh XV.5: atque oculos urget pedibus pectusque Nepai

SDDS

APh 259: οὐ μέν πως ἀπόλωλεν ἀπευθὴς ἐκ Διὸς ἀστήρ,

CPh 31: At non interiisse putari conuenit unam,

DDSS

APh 301: Τόξον ὅτ ἠέλιος καίηι καὶ ῥύτορα Τόξου,

CPh 73: mense, Sagittipotens solis cum sustinet orbem:

DDDS

APh 625: ἥμισυ δὲ Στεφάνοιο καὶ αὐτὴν ἔσχατον οὐρήν

CPh 409: lucet; at exoritur media de parte Corona,

In contrast to CPh, lines parallel in their metrical patterns to the original are even more frequent in Germanicus' translation. The following passages are selected from a total of twenty-six instances of correspon-

dence in the two works:[31]

DDDS

    APh 42: ἡ δ' ἑτέρη ὀλίγη μέν, ἀτὰρ ναύτηισιν ἀρείων

    GPh 45: Certior est Cynosura tamen sulcantibus aequor,

SDDD

    APh 77: τοῖοί οἱ κεφαλῆι ὑποκείμενοι ἀγλαοὶ ὦμοι

    GPh 77: Illis languet honos; umeris manet integer ardor,

SSDS

    APh 192: οἵηι δὲ κληῖδι θύρην ἔντοσθ ἀραρυῖαν

    GPh 196: Qualis ferratos subicit clauicula dentes,

SDSD

    APh 281: λαιῆι δὲ πτέρυγι σκαρθμὸς παρακέκλιται ῞Ιππου.

    GPh 283: at laeua fugit instantem sibi Pegason ala.

SSDD

    APh 530: ἄλληι κολλήσαιτο κυλινδόμενα τροχάλεια

    GPh 519: distantis orbis melius religasset ab uno.

DDDD

    APh 589: πάντα φέρων Ποτομὸν κέραος παρατείνεται ἄλλου.

    GPh 603: Cornua et Eridanus liquido feret utraque caelo.

DSDD

    APh 637: ῎Αρτεμις ἱλήκοι προτέρων λόγος, οἵ μιν ἔφαντο

    GPh 647: non ego, non primus, ueteres cecinere poetae,

The following parallel passages have been selected from the forty-three

instances of correspondence in Avienus' translation:[32]

DSDD

APh 1: 'Εκ Διὸs ἀρχώμεσθα. τὸν οὐδέποτ', ἄνδρεs, ἐῶμεν

AvPh 1: Carminis incentor mihi Iuppiter! auspice terras

APh 203: δεσμὰ δέ οἱ κεῖται καὶ ἐν οὐρανῶι, αἱ δ' ἀνέχονται

AvPh 468: uinculaque in caelo retinet quoque, tenuia quippe

SSDD

APh 477: τῶι δ' ἤτοι χροιὴν μὲν ἀλίγκιοs οὐκέτι κύκλοs

AvPh 946: non isti forma similis similisue colore

DSSD

APh 518: ἐν δέ τέ οἱ ζώνη εὐφεγγέοs Ὠρίωνοs

AvPh 1004: et rutilat stellis hic balteus Orionis.

APr 1098: αὐχμῶι ἀνιηθείs. χαίρει δέ που αἰπόλοs ἀνήρ

AvPr 1831: laetitia est duris pastoribus, adfore parcos

SDSD

APh 564: γίνοιντ' ἢ ὄρεοs κεκρυμμέναι ἀντέλλοιεν,

AvPh 1068: occultata iugo praetextaque rupe latebunt,

SSDS

APh 598: καὶ Δελφὶs δύνουσι καὶ εὐποίητοs 'Οιστόs·

AvPh 1117: cedit delphinus pelago ceditque sagitta,

DDDD

APh 694: ποσσί τε καὶ κεφαλῆι ἀνελίσσεται· ἀντία δ' Ἵππου

AvPh 1262: os equus adque pedes nouus exerit. ecce cadentis

Metrical correspondence between the Greek Phaenomena and the Latin

translations is also evident in the use of the 5½ caesura in translated

lines. First, we may discuss two of the translations in relation to the

Greek original. APh 160: αὐτὸν μέν μιν ἅπαντα μέγαν Διδύμων ἐπὶ λαιᾶ

is the model for GPh 163: Ipse ingens transuersus abit laeua Geminorum

and for AvPh 412: laeua iacet fusoque super se corpore tendit. Each

of these lines contains a 5½ caesura, in APh after the word, ἅπαντα, in

GPh after transuersus and in AvPh after fusoque. These lines are from

the passage which discusses the constellation Auriga. APh 199: νύκτα

περισκέψασθαι, ἵν αὐτίκα μᾶλλον ἴδηαι, found in a description of the

constellation Andromeda, can be compared with GPh 202: obscura sub noc-

te licet; sic emicat ore and with AvPh 461: sponte oculos in membra

rapit. face denique uertex. The 5½ caesura in APh 199 falls after the

word περισκέψασθαι, after nocte in GPh 202 and after membra in AvPh 461.

In a discussion of the constellation Aries, APh 228: αὐτὸs μὲν νωθῆs καὶ

ἀνάστεροs οἷα σελήνηι is comparable to GPh 230: officiat si luna, sua

uirtute nitere and to AvPh 517: orbe habeant nulloque decus dea proferat

ore. APh has a 5½ caesura after the word καί; in GPh it is found after

the word luna and in AvPh after the word nulloque. AvPh 517, therefore,

more closely resembles APh 228 since each line has a 5½ caesura after a

word meaning "and".

On a smaller scale, lines from the individual translations can

be compared with the Phaenomena in their common use of a 5½ caesura, and

several examples from the fifteen instances of correspondence between

Cicero's translation and the original of Aratus illustrate this coinci-

dence.[33] For convenience, the 5½ caesura in each line is designated with

a mark in the form of an inverted v:

APh 43: μειοτέρηι γὰρ πᾶσα‸ περιστρέφεται στροφάλιγγι.

CPh VII.5: <u>nam cursu interiore‸breui conuertitur orbe</u>.

APh 352: ποσσὶν ὑπ οὐραίοισι‸ Κυνὸς προπάροιθεν ἰόντος.

CPh 138: <u>clari posteriora‸Canis uestigia tundit</u>.

APh 505: καὶ μέγα Κενταύροιο‸ μετάφρενον ἐν δέ τε κέντρον

CPh 278: <u>tergaque Centauri atque‸Nepai portat acumen</u>;

Germanicus' translation, however, shows a higher incidence of correspon-
dence in the use of the 5½ caesura than Cicero's translation, and further-
more, the frequency of such occurrences is, at 4.1%, about twice as high
as that evident in Cicero's poem. The following examples are selected
from the thirty instances of correspondence between <u>GPh</u> and <u>APh</u>:[34]

APh 107: δημοτέρας ἤειδεν‸ἐπισπέρχουσα θέμιστας.

GPh 110: <u>iura dabas cultuque‸nouo rude uulgus in omnem</u>

APh 181: οὐρανὸν εἰς ὄνομ ἦλθεν,‸ἐπεὶ Διὸς ἐγγύθεν ἦσαν·

GPh 185: <u>ascendit totaque‸domo, quia Iuppiter auctor</u>

APh 233: Ἔστι δέ τοι καὶ ἔτ' ἄλλο‸τετυγμένον ἐγγύθι σῆμα

GPh 234: <u>Est etiam propiore‸deum cognoscere signo</u>,

APh 305: ἤτοι γὰρ μέγα Τόξον‸ἀνέλκεται ἐγγύθι κέντρου

GPh 312: <u>insequitur grauis Arcus‸et in lucem magis exit</u>.

APh 695: ἐξ οὐρῆς Κένταυρον‸ἐφέλκεται ἀστερίη νύξ·

GPh 695: <u>Auersum Chirona‸trahit nox atra sub undas</u>,

Avienus' translation, in contrast, displays twenty-seven instances of cor-
respondence in translated lines which exhibit the use of a 5½ caesura in
common with parallel lines from the <u>Phaenomena</u>.[35] Several examples of

this correspondence provide further evidence for the hypothesis that the translators were influenced by the metre of the Greek poem:

APh 62: μίσγονται δύσιές τε‸ καὶ ἀντολαὶ ἀλλήληισιν

AvPh 167: <u>occasus ortusque‸ salo moderante coercet</u>

APh 170: σήματι τεκμήραιτο‸ κάρη βοός, οἷά μιν αὐτοί

AvPh 432: <u>cornua sic uera sub‸ imagine curua dehiscunt</u>,

APh 513: ἐν δέ οἱ ἤματα νυξίν‸ ἰσαίεται ἀμφοτέρηισι

AvPh 997: <u>pensatur: nox aequa‸ diem subit aemula. Phoebus</u>

APh 612: οὐρῆς ἂν δεύοιτο.‸ μόνην δ' ἐπὶ χηλαὶ ἄγουσι

AvPh 1135: <u>longior extremaeque‸ polum subit indiga caudae</u>.

In addition to the agreement shown by the translations and the <u>Phaenomena</u> in the common use of the 5½ caesura in parallel lines, another important use of this caesura may be seen in translated lines which use a 5½ caesura in spite of the absence of a 5½ caesura in the corresponding lines from the Greek original. This independent employment of the 5½ caesura varies in each of the translations, and the <u>Phaenomena</u> segment of Cicero's translation, for example, contains seventeen instances of the 5½ caesura and fourteen of these caesurae are used in lines which correspond with lines in the original also possessing the 5½ caesura. Two of the other lines, which make use of a 5½ caesura independently, contain Latin equivalents for the Greek names of the constellations mentioned in the original lines. The use of <u>Capricornus</u> in <u>CPh</u> 467 instead of Ἀιγόκερως which is found in <u>APh</u> 684, and of <u>Auriga</u>, <u>Capra</u> and <u>Haedi</u> in <u>CPh</u> 468 instead of the Greek names Ἡνίοχος, Ἔριφοι and Ἀίξ in APh 679 would indi-

cate that Cicero was perhaps unwilling to heighten the Greek effect of lines with $5\frac{1}{2}$ caesurae by using Greek names in them. His exclusive use of Latin terms for Greek ones considerably lessens the Greek effect of the $5\frac{1}{2}$ caesurae in the lines.[36]

A greater number of examples of translated lines which use a $5\frac{1}{2}$ caesura independent of the original lines, however, may be found in the translation of Germanicus. Of the sixty-two instances of lines with a $5\frac{1}{2}$ caesura in his translation, thirty are translations of lines in the original which also have a $5\frac{1}{2}$ caesura. Fifteen lines with a $5\frac{1}{2}$ caesura from the remaining thirty-two lines, which do not correspond with the model line in a use of a $5\frac{1}{2}$ caesura, contain references to the constellations, either by means of the Latin equivalents for the Greek names, or in greater proportion, by means of Latin transliterations of the Greek names. GPh 313, for example, mentions Cynosura, the Latinized version of Greek Κυνό-συρα. GPh 505 refers to Hydrus, Cratera and Coruus. Hydrus and Cratera are Latinized versions of the Greek names ʽΗδρος and Κρητήρ, and Coruus is the Latin equivalent of the Greek Κόραξ. GPh 508 names Ophiuchus, which is the transliterated form of Greek ʼΟφιοῦχος and GPh 645 refers to Scorpios and Orion, which are Latin transliterations of the Greek names Σκορπίος and ʼΩρίων, respectively. The Latin equivalent of Λαγῶς, Lepus, is found in GPh 683, and in the same line the transliteration of Greek ʼΑργώ as Latin Argo is present. GPh 688 also uses the form Procyon for the Greek name Προκύων.[37] Such an emphasis upon using Latin transliterations of Greek names indicates, in contrast to Cicero's treatment, a preference on the part of Germanicus to use the $5\frac{1}{2}$ caesura in lines which mention constellations in their Greek form. By this means Germanicus provides his

verses with a definite "Greek touch".

Like Germanicus and Cicero, Avienus also makes use of the $5\frac{1}{2}$ caesura in lines corresponding with verses from the original of Aratus, which themselves lack a $5\frac{1}{2}$ caesura. Eighty-two instances of lines containing a $5\frac{1}{2}$ caesura are found in AvPh and twenty-seven of these lines employ a $5\frac{1}{2}$ caesura in agreement with parallel lines from the original. Of the fifty-five remaining examples, twelve possess references to the constellations both by their transliterated forms and by the close Latin equivalents for the Greek names. AvPh 441, for example, refers to Cepheus, the Latin transliteration of the Greek name Κηφῆos. AvPh 720 mentions Taurus, a form derived from Greek Ταῦpos. AvPh 893 names Cancer, the Latin equivalent of the Greek name Καρκίνοs. AvPh 1048 mentions Capricornus, Greek Ἀιγόκερωs, and AvPh 1126 refers to Greek Ἀργώ by means of the transliterated form Argo.[38] Four other lines contain other Greek words, Panyasis (AvPh 175), Hesperides (AvPh 180), Lenaeus (AvPh 386) and Olympus (AvPh 713), but in total the frequency of lines with the $5\frac{1}{2}$ caesura used independently of a $5\frac{1}{2}$ caesura in lines from the Greek original in AvPh is about equal to that discovered for GPh. This notable usage of the $5\frac{1}{2}$ caesura in both GPh and AvPh to provide a special "Greek touch" to the Latin verses contrasts, therefore, with the general avoidance of the independent use of the $5\frac{1}{2}$ caesura in CPh.

In conclusion, a close examination of translated lines which correspond with the original in a common use of the same metrical device suggests that the translations were influenced metrically in certain areas by the Phaenomena. According to the evidence provided by statis-

tics from the first four sections, the translations bear greater similarity to each other and to other Latin poetry than to their Greek model, but metrical correspondence in common elisions, common metrical patterns and common $5\frac{1}{2}$ caesurae is unusual enough to be considered significant in reference to literary studies. The independent use of the $5\frac{1}{2}$ caesura in lines from the Latin translations, in addition, provides a further important indication of the extent to which the translators added specifically "Greek touches" to their verses. The poems of Germanicus and Avienus, which contain a relatively large number of $5\frac{1}{2}$ caesurae used independently of $5\frac{1}{2}$ caesurae in the corresponding lines from the original, make greatest use of this device, while Cicero's poem, which uses the $5\frac{1}{2}$ caesura mainly in lines which translate Greek verses with a $5\frac{1}{2}$ caesura, remains largely unaffected by it. The comparative study of the metre of Latin translations of a Greek original, therefore, has shown that metre can play a significant role in our understanding of the practice of verse translation at Rome.

TABLE A

METRICAL PATTERNS IN APh, CPh, GPh and AvPh

	APh		CPh		GPh		AvPh	
DSSS	1	(0.1%)	91	(16.9%)	117	(16.3%)	165	(12.7%)
DSDS	34	(4.7%)	32	(5.9%)	66	(9.2%)	123	(9.5%)
DSSD	37	(5.1%)	17	(3.2%)	37	(5.1%)	142	(10.9%)
DSDD	113	(15.5%)	6	(1.1%)	33	(4.6%)	87	(6.7%)
DDSS	5	(0.7%)	73	(13.5%)	92	(12.8%)	126	(9.7%)
DDDS	37	(5.1%)	31	(5.7%)	30	(4.2%)	75	(5.8%)
DDSD	48	(6.6%)	16	(3.0%)	33	(4.6%)	96	(7.4%)
DDDD	169	(23.2%)	3	(0.6%)	11	(1.5%)	59	(4.6%)
SDSS	4	(0.5%)	69	(12.8%)	81	(11.3%)	76	(5.9%)
SDDS	30	(4.1%)	38	(7.0%)	34	(4.7%)	76	(5.9%)
SDSD	32	(4.4%)	22	(4.1%)	39	(5.4%)	74	(5.7%)
SDDD	117	(16.0%)	9	(1.7%)	11	(1.5%)	37	(2.9%)
SSSS	1	(0.1%)	73	(13.5%)	55	(7.6%)	42	(3.2%)
SSDS	17	(2.3%)	36	(6.7%)	43	(6.0%)	43	(3.3%)
SSSD	9	(1.2%)	17	(3.2%)	22	(3.1%)	43	(3.3%)
SSDD	76	(10.4%)	7	(1.3%)	16	(2.2%)	33	(2.5%)
TOTAL	730		540		720		1297	

LINES OMITTED:

SPONDAIC	0	2	4	27
CORRUPT	2	13	1	1
TOTAL VERSES	730	542	724	1324

TABLE B

METRICAL PATTERNS IN <u>APr</u>, <u>CPr</u>, <u>GFr</u> and <u>AvPr</u>

	<u>APr</u>		<u>CPr</u>		<u>GFr</u>		<u>AvPr</u>	
DSSS	2	(0.5%)	3	(11.1%)	36	(16.4%)	83	(15.1%)
DSDS	22	(5.2%)	2	(7.4%)	15	(6.8%)	48	(8.7%)
DSSD	30	(7.1%)	0	0	20	(9.1%)	57	(10.4%)
DSDD	73	(17.3%)	0	0	11	(5.0%)	29	(5.3%)
DDSS	5	(1.2%)	5	(18.5%)	30	(13.7%)	51	(9.3%)
DDDS	28	(6.6%)	3	(11.1%)	18	(8.2%)	29	(5.3%)
DDSD	32	(7.6%)	0	0	17	(7.8%)	38	(6.9%)
DDDD	79	(18.7%)	1	(3.7%)	9	(4.1%)	10	(1.8%)
SDSS	4	(0.9%)	5	(18.5%)	17	(7.8%)	44	(8.0%)
SDDS	16	(3.8%)	2	(7.4%)	7	(3.2%)	29	(5.3%)
SDSD	15	(3.6%)	0	0	5	(2.3%)	31	(5.6%)
SDDD	54	(12.8%)	2	(7.4%)	4	(1.8%)	19	(3.5%)
SSSS	1	(0.2%)	1	(3.7%)	10	(4.6%)	42	(7.6%)
SSDS	18	(4.3%)	1	(3.7%)	12	(5.5%)	20	(3.6%)
SSSD	8	(1.9%)	1	(3.7%)	4	(1.8%)	15	(2.7%)
SSDD	35	(8.3%)	1	(3.7%)	4	(1.8%)	5	(0.9%)
<u>TOTAL</u>	422		27		219		550	

<u>LINES OMITTED</u>:

SPONDAIC	0	0	1	3
CORRUPT	0	0	2	0
<u>TOTAL</u> <u>VERSES</u>	422	27	220	553

TABLE C

CORRUPT LINES

<u>APh</u> 138

<u>APh</u> 613

<u>CPh</u> I

<u>CPh</u> IV.2

<u>CPh</u> IV. bis

<u>CPh</u> VI.2

<u>CPh</u> XI.1

<u>CPh</u> XI.11

<u>CPh</u> XVI.3

<u>CPh</u> XVI.5

<u>CPh</u> XXV.3

<u>CPh</u> 272a

<u>CPh</u> 366a

<u>CPh</u> 419

<u>CPh</u> 463

<u>GPh</u> 59a and 59b

<u>GFr</u> V.5

<u>GFr</u> VI.1

<u>AvPh</u> 819

TABLE D

ELISIONS IN APh and APr

Number of lines	APh		APr	
	730		422	
Foot				
1	48	(6.6%)	33	(7.8%)
2	66	(9.0%)	40	(9.5%)
3	22	(3.0%)	10	(2.4%)
4	68	(9.3%)	42	(10.0%)
5	36	(4.9%)	18	(4.3%)
6	17	(2.3%)	6	(1.4%)
1+2	2	(0.3%)	6	(1.4%)
1+3	0	0	1	(0.2%)
1+4	8	(1.1%)	3	(0.7%)
1+5	3	(0.4%)	2	(0.5%)
2+4	8	(1.1%)	1	(0.2%)
2+5	4	(0.5%)	3	(0.7%)
2+6	3	(0.4%)	0	0
3+4	2	(0.3%)	1	(0.2%)
3+5	0	0	2	(0.5%)
4+5	2	(0.3%)	0	0
4+6	2	(0.3%)	0	0
5+6	0	0	3	(0.7%)
1+2+5	2	(0.3%)	0	0
2+3+5	1	(0.1%)	0	0
TOTAL	294	(40.3%)	171	(40.5%)

TABLE E

ELISIONS IN CPh and CPr

Number of lines	CPh		CPr	
	542		27	
Foot				
1	19	(3.5%)	2	(7.4%)
2	42	(7.7%)	0	0
3	36	(6.6%)	0	0
4	19	(3.5%)	2	(7.4%)
5	7	(1.3%)	0	0
6	3	(0.6%)	0	0
1+2	4	(0.7%)	0	0
1+3	3	(0.6%)	0	0
1+5	1	(0.2%)	0	0
2+3	5	(0.9%)	0	0
2+4	2	(0.4%)	0	0
2+5	1	(0.2%)	0	0
3+4	1	(0.2%)	0	0
3+6	1	(0.2%)	0	0
1+2+3	1	(0.2%)	0	0
1+3+6	1	(0.2%)	0	0
TOTAL	146	(26.9%)	4	(14.8%)

TABLE F

ELISIONS IN GPh and GFr

Number of lines	GPh		GFr	
	724		220	
Foot				
1	30	(4.1%)	7	(3.2%)
2	54	(7.5%)	16	(7.3%)
3	19	(2.6%)	4	(1.8%)
4	23	(3.2%)	9	(4.1%)
5	9	(1.2%)	4	(1.8%)
6	4	(0.6%)	1	(0.5%)
1+2	6	(0.8%)	0	0
1+3	2	(0.3%)	0	0
1+4	1	(0.1%)	1	(0.5%)
2+3	2	(0.3%)	0	0
2+4	5	(0.7%)	0	0
2+5	3	(0.4%)	0	0
3+4	3	(0.4%)	0	0
3+5	4	(0.6%)	0	0
1+2+4	1	(0.1%)	0	0
1+4+5	0	0	1	(0.5%)
TOTAL	166	(22.9%)	43	(19.5%)

TABLE G

ELISIONS IN AvPh and AvPr

	AvPh		AvPr	
Number of lines	1324		553	
Foot				
1	61	(4.6%)	27	(4.9%)
2	93	(7.0%)	27	(4.9%)
3	31	(2.3%)	9	(1.6%)
4	76	(5.7%)	15	(2.7%)
5	47	(3.5%)	19	(3.4%)
6	5	(0.4%)	2	(0.4%)
1+2	8	(0.6%)	1	(0.2%)
1+3	0	0	1	(0.2%)
1+4	1	(0.1%)	1	(0.2%)
1+5	2	(0.2%)	0	0
2+3	3	(0.2%)	0	0
2+4	4	(0.3%)	4	(0.7%)
2+5	3	(0.2%)	0	0
3+5	1	(0.1%)	0	0
3+6	1	(0.1%)	0	0
4+5	1	(0.1%)	0	0
1+2+4	1	(0.1%)	0	0
3+4+5	1	(0.1%)	0	0
TOTAL	339	(25.6%)	105	(19.0%)

TABLE H

CAESURAE AND DIAERESES IN _APh_

	0	1	4	1+4	TOTAL
3	0	0	0	1	1
5	2	0	16	42	60
$5\frac{1}{2}$	11	21	4	28	64
3-5	2	5	26	35	68
3-7	0	1	3	2	6
5-7	13	42	15	26	96
3-5-7	25	34	24	23	106
$5\frac{1}{2}$-7	6	23	4	20	53
$3-5\frac{1}{2}$-7	13	13	17	11	54
$3-5-5\frac{1}{2}$-7	11	5	11	1	28
$3-5\frac{1}{2}$	37	15	40	35	127
$3-5-5\frac{1}{2}$	6	1	18	11	36
$5-5\frac{1}{2}$-7	2	5	1	5	13
$5-5\frac{1}{2}$	0	1	4	13	18
TOTAL	128	166	183	253	730

TABLE I

CAESURAE AND DIAERESES IN APr

	0	1	4	1+4	TOTAL
3	1	0	1	0	2
5	6	2	6	14	28
7	0	2	0	0	2
5½	8	10	6	17	41
3-5	4	1	22	6	33
3-7	0	0	1	0	1
5-7	13	28	14	17	72
3-5-7	15	21	11	10	57
5½-7	2	5	4	5	16
3-5½-7	14	5	21	0	40
3-5-5½-7	6	0	1	1	8
3-5½	31	18	16	25	90
3-5-5½	3	3	9	6	21
5-5½-7	0	0	1	4	5
5-5½	1	1	1	3	6
TOTAL	104	96	114	108	422

TABLE J

CAESURAE AND DIAERESES IN CPh

	0	1	4	1+4	TOTAL
3	0	0	5	2	7
5	2	1	33	54	90
7	2	2	3	4	11
$5\frac{1}{2}$	0	0	0	3	3
3-5	4	0	100	25	129
3-7	12	1	7	4	24
5-7	24	32	19	28	103
3-5-7	65	30	56	7	158
$5\frac{1}{2}$-7	4	0	0	2	6
$3-5\frac{1}{2}$-7	0	0	1	0	1
$3-5\frac{1}{2}$	0	0	7	0	7
$3-5-5\frac{1}{2}$	0	0	1	0	1
0	0	0	2	0	2
TOTAL	113	66	234	129	542

TABLE K

CAESURAE AND DIAERESES IN <u>CPr</u>

	0	1	4	1+4	TOTAL
5	0	0	3	2	5
7	0	0	0	1	1
$5\frac{1}{2}$	0	0	1	1	2
3-5	0	0	5	0	5
5-7	1	1	1	0	3
3-5-7	6	0	3	1	10
$3-5\frac{1}{2}-7$	0	0	1	0	1
TOTAL	7	1	14	5	27

TABLE L

CAESURAE AND DIAERESES IN <u>GPh</u>

	0	1	4	1+4	TOTAL
3	1	0	6	0	7
5	0	6	31	62	99
7	0	0	1	1	2
$5\frac{1}{2}$	1	0	0	0	1
3-5	13	8	78	36	135
3-7	14	0	12	0	26
5-7	35	63	35	62	195
3-5-7	89	22	60	27	198
$5\frac{1}{2}$-7	5	0	0	4	9
3-$5\frac{1}{2}$-7	23	5	20	0	48
3-$5\frac{1}{2}$	3	0	1	0	4
TOTAL	184	104	244	192	724

TABLE M

CAESURAE AND DIAERESES IN GFr

	0	1	4	1+4	TOTAL
3	0	0	1	0	1
5	2	4	14	17	37
7	0	1	0	0	1
3-5	7	4	28	9	48
3-7	1	0	1	0	2
5-7	9	18	11	13	51
3-5-7	20	13	23	11	67
5½-7	0	1	0	0	1
3-5½-7	4	0	5	2	11
3-5-5½-7	1	0	0	0	1
TOTAL	44	41	83	52	220

TABLE N

CAESURAE AND DIAERESES IN AvPh

	0	1	4	1+4	TOTAL
3	2	0	0	2	4
5	19	32	100	176	327
$5\frac{1}{2}$	0	0	1	0	1
3-5	30	16	142	79	267
3-7	8	1	10	1	20
5-7	66	99	71	114	350
3-5-7	70	46	102	56	274
$5\frac{1}{2}$-7	0	1	0	2	3
3-$5\frac{1}{2}$-7	38	1	36	0	75
3-5-$5\frac{1}{2}$-7	0	0	1	0	1
3-5-$5\frac{1}{2}$	0	0	0	1	1
5-$5\frac{1}{2}$-7	1	0	0	0	1
TOTAL	234	196	463	431	1324

TABLE O

CAESURAE AND DIAERESES IN AvPr

	0	1	4	1+4	TOTAL
3	0	0	1	0	1
5	14	10	57	95	176
3-5	9	11	82	41	143
3-7	2	0	1	0	3
5-7	23	34	21	37	115
3-5-7	29	14	37	14	94
$5\frac{1}{2}$-7	0	0	1	1	2
3-$5\frac{1}{2}$-7	8	0	9	0	17
5-$5\frac{1}{2}$	0	0	1	0	1
TOTAL	85	69	210	188	552

NOTES

[1] A discussion of the controversial subject of rhythm has not been
included with this study of metre in the Phaenomena and the Latin verse
translations. Whereas the transferral of metrical forms can be docu-
mented and studied both quantitatively and qualitatively, a similar trans-
ferral of rhythm is difficult to detect.

[2] The new emendations to the text of Avienus' translation found in
J. Soubiran, ed., Aviénus: Les Phénomènes d'Aratos (Paris: Les Belles
Lettres, 1981) do not significantly affect the metrical statistics com-
piled for Avienus' translation. For a comparison of the texts of Sou-
biran and A. Breysig, ed., Rufi Festi Avieni Aratea (Leipzig: Teubner,
1882), see Appendix I.

[3] The guidelines chosen for this section were established by G.E.
Duckworth in "Five Centuries of Latin Hexameter Poetry", TAPhA, 98 (1967),
pp. 77-150; "Horace's Hexameter and the Date of the Ars Poetica", TAPhA,
96 (1965), pp. 73-95; "Studies in Latin Hexameter Poetry", TAPhA, 97
(1966), pp. 67-113; "Variety and Repetition in Vergil's Hexameters", TAPhA,
95 (1964), pp. 9-65; Vergil and Classical Hexameter Poetry: A Study in
Metrical Variety (Ann Arbor: University of Michigan Press, 1969). These
studies offer greater possibilities for obtaining useful information than
the two studies by J. LaRoche, "Der Hexameter bei Apollonios, Aratos und
Kallimachos", WS, 21 (1899), pp. 161-197 and "Der Hexameter bei Vergil",
WS, 23 (1901), pp. 121-142. In addition, these two studies are based on
texts which are now out of date. Pioneering investigations like those
of Duckworth have not gone without criticism. J. Perret in a review of
Duckworth's book, Metrical Variety, in REL, 48 (1970), pp. 498-500 and
W.C. Scott in a review in CPh, 66 (1971), pp. 271-273 have called Duck-
worth's study an over-statistical work and an invasion of the sphere of
poetic creativity. They have also criticized Duckworth for this concen-
tration on a single aspect of Latin hexameter poetry, the metrical pat-
terns. Such criticism, however, is unfair because it is precisely this
single-faceted approach which allows an objective and accurate view of
at least one aspect of the dactylic hexameter in Latin.

[4] Duckworth, "Vergil's Hexameter", p. 17.

[5] Table III in Duckworth's Metrical Variety offers statistics for
comparison. The ratio of dactyls to spondees in the Iliad is 22 to 10;
in the Odyssey, 22 dactyls to 10 spondees; in Hesiod, 21 dactyls to 11
spondees; in Theocritus I-XIII 20 dactyls to 12 spondees and in Apol-
lonius Rhodius, 22 dactyls to 10 spondees. The ratio in APh, therefore,
is identical with those found in the Iliad, Odyssey and Argonautica.
Duckworth provides similar information for Latin poems. In Lucretius'
De Rerum Natura, the ratio of dactyls to spondees is 14 to 18 (compare
CPh). In the Aetna, the ratio is 11 dactyls to 21 spondees (Duckworth,

"Studies", p. 112). In Ovid's Metamorphoses, the ratio of dactyls to spondees is 20 to 12 (Duckworth, Metrical Variety, Table I). The ratio in GPh is, therefore, identical to that of the Aetna to which it has often been compared. The ratio of dactyls to spondees in Claudian's De Raptu Proserpinae is 14 to 18 (Duckworth, Metrical Variety, Table I). Compare the different ratio in AvPh.

[6]According to Duckworth (Metrical Variety, Table III), the favored pattern in Homer's poems is DDDD, used with a frequency in the Iliad of 22.8% and in the Odyssey of 20.1%. Hesiod, to whom Aratus is compared, however, favors the metrical pattern DSDD (18.2%) in his works. Theocritus, by comparison, uses the metrical pattern SDDD most frequently (Duckworth, "Vergil's Hexameter", p. 18). Duckworth's figures have been rounded to the nearest tenth place.

[7]This important contribution of Cicero is noted by Duckworth, "Studies", p. 79. The metrical pattern DSSS is also favored by Lucretius, the author of the Aetna, Manilius ("Studies", pp. 111-113), Vergil in the Georgics and Aeneid (Duckworth, "Vergil's Hexameter", p. 59), Lucan (Duckworth, "Five Centuries", p. 147) and Ausonius in his Cento (Duckworth, Metrical Variety, Table I). On the contrary, the favored metrical pattern in Ennius is SSSS (Duckworth, "Studies", p. 110); the favored pattern in Vergil's Eclogues is DDSS (Duckworth, "Vergil's Hexameter", p. 59); the favored pattern in Ovid's Metamorphoses is DDSS (Duckworth, "Studies", p. 111); the favored pattern in Claudian's De Raptu Proserpinae is DSDS (Duckworth, Metrical Variety, Table I).

[8]These partial figures for CPr are based on the total for the first seven metrical patterns plus an average of the five patterns which are all, because of their identical frequency, the eighth most common pattern. GFr has been ignored in the discussion when it would be necessary to compare it to CPr and AvPr because it is not strictly a translation of Aratus' Prognostica. GFr will only be considered, therefore, in comparison with GPh.

[9]In Germanicus' poem, the frequency for DSSS is almost identical for the two halves of the poem. The frequency for the first four patterns is greater in GPh than GFr, but the frequency for the first eight metrical patterns is lower in GPh than in GFr.

[10]AvPh shares with Vergil's Eclogues a common use of the same seven of eight patterns, with the Georgics a common five out of eight patterns and with the Aeneid, a common five out of eight patterns. (for Vergil, see Duckworth, "Vergil's Hexameter", Table I). AvPh and Ovid's Metamorphoses share a common six out of eight metrical patterns (for Ovid, see Duckworth, "Studies", p. 111). Manilius and AvPh share the same five of eight metrical patterns (for Manilius, see Duckworth, "Studies", p. 113). AvPh and Claudian's De Raptu Proserpinae and Ausonius' Mosella share a common six out of eight patterns (for Claudian and Ausonius, see Duckworth, "Five Centuries", p. 148).

[11] The Latin translations and APr all have a greater number of dactyls before an initial diaeresis. The ratio of dactyls to spondees in APh, however, is almost equal. These conclusions are based on statistics prepared for two hundred lines (approximately) in the individual sections of the poems: APh 1-200, APr 733-933; CPh 1-200, CPr fg. I-VI, GPh 1-200, GFr IV.1-163, AvPh 1-200; AvPr 1326-1526. See n. 26.

[12] S.E. Winbolt, Latin Hexameter Verse (New York: Garland Publishing, 1903, repr. 1978), pp. 106-107. M.W. Drobisch, "Weitere Untersuchungen über die Formen des Hexameter des Vergil, Horaz und Homer", BSGL, 20 (1868), pp. 17, 58 concludes that, excepting Ennius, Cicero and Silius Italicus, the Latin poets have more dactyls than spondees in the first foot. Statistics for CPh and CPr, calculated for this study, indicate however, that of the two, CPr is marginally more dactylic in the first foot. C. Bailey, ed., Titi Lucreti Cari De Rerum Natura Libri Sex (Oxford: Clarendon Press, 1947), I, 111 states that the marked preference for the dactylic over the spondaic first foot began with Lucretius and continued in Vergil.

[13] Compare the results found for Cicero's use of Greek words and archaisms in Chapter V.

[14] Drobisch, pp. 17, 58 states that without exception the Latin poets have more spondees in the fourth foot. Our figures for the translations support this statement.

[15] For this definition, see C.G. Cooper, An Introduction to the Latin Hexameter (Melbourne: Macmillan, 1966), p. 11. Scholars debate whether elision affected pronunciation or accentuation. L.P. Wilkinson, "The Augustan Rules for Dactylic Verse", CQ, 34 (1940), p. 33 states that elision does not alter accentuation. W.R. Hardie, Res Metrica (Oxford: Clarendon Press, 1920), p. 39 believes that the elided vowel was surely, if faintly, pronounced.

[16] E. Sturtevant and R. Kent, "Elision and Hiatus in Latin Prose and Verse", TAPhA, 46 (1915), p. 149 state that Ennius used elisions infrequently. R.G. Kent, "Likes and Dislikes in Elision and the Vergilian Appendix", TAPhA, 54 (1923), p. 95 notes that Catullus in Carmen 64 uses elisions with a frequency of 34%; the Eclogues have elisions with a frequency of 29%, the Georgics, with a frequency of 49% and the Aeneid with a frequency of 55% (p. 90). In the first book of of the Metamorphoses, Ovid uses elisions with a frequency of 27% (p. 91). The Aetna has a relatively high frequency of 41% for elisions, while Lucan's poem has a relatively low frequency for elisions, 18% (Sturtevant and Kent, "Elision", p. 149).

[17] Most modern definitions of caesura exhibit more disagreement than unity. Hardie, p. 14, for example, believes that a line has only one caesura. F.W. Shipley, "Problems of the Latin Hexameter", TAPhA, 69 (1938), p. 160 feels that a caesura is not a mechanical pause, but a pause

which sense, rhetoric or poetical emphasis demanded. E. Sturtevant, "The Doctrine of Caesura, A Philological Ghost", AJPh, 45 (1924), p. 329ff. declares that caesura was neither a metrical, nor a rhythmical, nor a sense pause. S.E. Bassett, "The Caesura, A Modern Chimaera", CW, 18 (1925), p. 76 even goes so far as to state that caesura is a figment of the modern imagination. P.B. Whitehead, "A New Method of Investigating the Caesura in the Latin Hexameter and Pentameter", AJPh, 51 (1930), p. 361 defines caesura as a sense pause. But J. Hellegouarc'h, "La détermination de la césure dans l'hexametre latin", IL, 14 (1962), p. 157 holds that caesura was a rhythmical pause; A. de Groot, "Wesen und Gesetze der Caesur", Mnemosyne, 3rd series, 2 (1935), pp. 119-120 holds this view. O.J. Todd, on the other hand, in "Caesura Rediviva", CPh, 37 (1942), p. 24 defines caesura as a purely mechanical device which has no relation to sense pause.

[18] For a history of caesura and diaeresis see, for example, Bassett, "A Modern Chimaera", pp. 76-79 and S.E. Bassett, "The Theory of the Homeric Caesura According to the Extant Remains of the Ancient Doctrine", AJPh, 40 (1919), pp. 343-372.

[19] L. Nougaret, Traité de métrique latine classique (Paris: Librairie C. Klincksieck, 1948), p. 35.

[20] See Winbolt, p. 72. Scholars debate whether apparent caesurae should be taken into account. Winbolt, p. 73, for example, believes that apparent caesurae should be taken into account because they are valuable supports for the other caesurae in the line. Winbolt, p. 74, on the other hand classifies all apparent caesurae in any foot as tertiary caesurae, and since this discussion is confined to principal caesurae only, we need not count apparent caesurae in our statistics. Bailey, Lucretius, I, 112 also does not consider apparent caesurae in his study of Lucretius' verses.

[21] Compare W.J.M. Koster, Traité de métrique grecque suivi d'un précis de métrique latine (Leyde: A.W. Sijthoff, 1953), p. 70; in Homer, the 5 and 5½ caesurae are almost equal in frequency, but in Callimachus the 5 caesura has a lower incidence. Hardie, p. 9 states that in Ennius, the 5½ caesura occurs in 8% of lines, while W.G.D. Butcher, "The Caesura in Vergil and its Bearing on the Authenticity of the Pseudo-Vergiliana", CQ, 8 (1914), p. 130 notes that the 5½ caesura occurs in 11.6% of all lines in Vergil; he includes apparent caesurae in this figure. According to Sturtevant, "Philological Ghost", p. 342, the 5½ caesura occurs in 7.2% of three hundred lines from Lucretius' De Rerum Natura.

[22] According to Wilkinson, "Augustan Rules", p. 32, the 5 caesura occurs in more than 80% of total lines in Ennius. According to Butcher, p. 130, the 5 caesura occurs in Vergil's poems in an average of 85% of total lines.

[23] Compare the figure of 8.6% for GPh with that discovered for the Aetna, 15% (Butcher, p. 130). On the basis of metrical patterns, Duckworth,

"Studies", p. 106ff. points out the similarities between Germanicus' poem and the Aetna, but the criterion of $5\frac{1}{2}$ caesura indicates that the poems are dissimilar in this area of metrical treatment. See n. 5.

[24]Compare n. 13.

[25]According to Bailey, Lucretius, I, 112, Ennius uses a fourth foot diaeresis in 40.1% of his lines; Lucretius in his first book uses the bucolic diaeresis with a frequency of 59.0%. Vergil's Eclogues contian this diaeresis in 64.3% of the lines and book twelve of the Aeneid has a frequency of 54.4% for this diaeresis. Bailey, I, 110 also provides figures for the occurrence of the initial diaeresis in other Latin poems; in Ennius, the 1 diaeresis occurs in 32.2% of the total lines; in the second book of Lucretius' De Rerum Natura, it is found in 44.0% of lines and in Vergil's Aeneid 6., in 46.6% of lines.

[26]Ten instances of correspondence in the common use of elisions in Cicero's translation and the original of Aratus are present:

APh 132 and CPh XVIII.3	APh 460 and CPh 234
APh 240 and CPh 12	APh 520 and CPh 292
APh 332 and CPh 113	APh 564 and CPh 344
APh 363 and CPh 151	APh 578 and CPh 358
APh 435 and CPh 206	APh 579 and CPh 359

Seven examples in which Germanicus makes use of an elision in the same foot as that found in the corresponding line from the Greek original are present:

APh 115 and GPh 120	APh 579 and GPh 594
APh 344 and GPh 346	APh 691 and GPh 689
APh 441 and GPh 419	APh 725 and GPh 720
APh 446 and GPh 428	

Twelve instances of the existence of a common elision in the same foot in Avienus' translation and Aratus' poem can be found:

APh 46 and AvPh 140	APh 158 and AvPh 417
APh 92 and AvPh 257	APh 486 and AvPh 957
APh 99 and AvPh 279	APh 521 and AvPh 1007
APh 104 and AvPh 298	APh 623 and AvPh 1147
APh 115 and AvPh 318	APh 634 and AvPh 1168
APh 144 and AvPh 362	APh 725 and AvPh 1310

As this list indicates, line references will be made on the basis of the entire poem. In other words, line 158 from the Phaenomena portion of Aratus' poem will be noted as APh 158. Similarly, line 733 of the poem, which is actually the first line in the Prognostica portion, will be noted as APr 733.

[27]Compare Soubiran, Cicéron, p. 164.

[28] Some other instances of the use of the 5 and 5½ caesura to-
gether in one line are APh 115, APh 132, APh 156, APh 165, APh 234,
APh 370, APh 431, APh 650, APh 722, AvPh 212 and AvPh 1313.

[29] Although the translations agree in their use of a 5½ caesura
in these lines in which they share the use of the same metrical pattern,
not one pair corresponds in the use of an identical caesura-diaeresis
combination. Compare APh 152 (3-5½-1-4) and CPh XXIII (3-5½-4), APh 262
(3-5-5½-4) and CPh 35 (3-5½-4), APh 345 (5½) and CPh 128 (3-5-5½-4),
APh 282 (5½-4) and GPh 284 (5½-7-1-4), APh 199 (5½-4) and AvPh 461
(3-5½-7-4). This is significant because it indicates further that the
translators were selective of the metrical aspects of the line from the
Greek Phaenomena which they wished to translate.

[30] Other examples of correspondence in the use of common metrical
patterns in Cicero's translation and Aratus' poem are

APh 159 and CPh XXIV	APh 546 and CPh 322
APh 172 and CPh XXVIII.1	APh 556 and CPh 337
APh 262 and CPh 35	APh 663 and CPh 453
APh 345 and CPh 128	APh 697 and CPh 478
APh 479 and CPh 269	

[31] Other instances of lines from Germanicus' translation which
agree with Aratus' lines in a common use of the same metrical pattern
are

APh 59 and GPh 60	APh 282 and GPh 284
APh 91 and GPh 90	APh 367 and GPh 372
APh 94 and GPh 94	APh 448 and GPh 429
APh 96 and GPh 96	APh 517 and GPh 503
APh 102 and GPh 109	APh 521 and GPh 508
APh 137 and GPh 140	APh 577 and GPh 592
APh 155 and GPh 156	APh 640 and GPh 652
APh 191 and GPh 195	APh 665 and GPh 676
APh 230 and GPh 232	APh 718 and GPh 713-714
APh 263 and GPh 263	

[32] Other examples of lines from Avienus' translation which agree
with Aratus' Phaenomena in a common use of the same metrical pattern are

APh 18 and AvPh 71	APh 403 and AvPh 846
APh 30 and AvPh 117	APh 436 and AvPh 879
APh 73 and AvPh 194	APh 491 and AvPh 963
APh 152 and AvPh 401	APh 499 and AvPh 976
APh 153 and AvPh 402	APh 519 and AvPh 1005
APh 199 and AvPh 461	APh 529 and AvPh 1019
APh 218 and AvPh 489	APh 531 and AvPh 1021
APh 273 and AvPh 634	APh 556 and AvPh 1056
APh 286 and AvPh 651	APh 627 and AvPh 1154

APh 313 and AvPh 694

APh 330 and AvPh 727

APh 335 and AvPh 741

APh 340 and AvPh 752

APh 341 and AvPh 755

APh 350 and AvPh 766

APh 368 and AvPh 808

APh 640 and AvPh 1183

APh 647 and AvPh 1194

APh 654 and AvPh 1204

APh 659 and AvPh 1209

APh 715 and AvPh 1291

APh 726 and AvPh 1313

[33]Other instances of the common use of the 5½ caesura in parallel lines from Cicero's translation and Aratus' poem are

APh 46 and CPh VIII.3

APh 152 and CPh XXIII

APh 262 and CPh 35

APh 259 and CPh 31

APh 270 and CPh 44

APh 338 and CPh 120

APh 345 and CPh 128

APh 430 and CPh 201

APh 436 and CPh 207

APh 465 and CPh 241

APh 591 and CPh 372

[34]Other examples of the common use of the 5½ caesura in corresponding lines from Germanicus' translation and the *Phaenomena* are

APh 14 and GPh 3

APh 25 and GPh 22

APh 29 and GPh 28

APh 35 and GPh 38

APh 40 and GPh 41

APh 42 and GPh 45

APh 94-95 and GPh 94-95

APh 105 and GPh 104

APh 159 and GPh 172

APh 160 and GPh 163

APh 199 and GPh 202

APh 228 and GPh 230

APh 262 and GPh 262

APh 282 and GPh 284

APh 312 and GPh 316

APh 323 and GPh 329

APh 360 and GPh 363

APh 458 and GPh 442

APh 483 and GPh 462

APh 487 and GPh 465

APh 557 and GPh 570

APh 606 and GPh 621

APh 615 and GPh 274

APh 692 and GPh 691

[35]Other examples of the common use of the 5½ caesura in parallel lines from the translation of Avienus and the original of Aratus are

APh 22 and AvPh 88

APh 28 and AvPh 119

APh 40 and AvPh 130

APh 70 and AvPh 192

APh 81 and AvPh 234

APh 100 and AvPh 291

APh 160 and AvPh 412

APh 197 and AvPh 459

APh 199 and AvPh 461

APh 228 and AvPh 517

APh 236 and AvPh 530

APh 252 and AvPh 566

APh 262 and AvPh 580-581

APh 289 and AvPh 658

APh 333 and AvPh 736

APh 347 and AvPh 764

APh 359 and AvPh 781

APh 409 and AvPh 855

APh 418 and AvPh 864

APh 444 and AvPh 896

APh 573 and AvPh 1082

APh 595 and AvPh 1112

APh 705 and AvPh 1278

[36]CPh 76, which uses a 5½ caesura in its translation of APh 304 does not fit into either category.

[37]Other lines using a 5½ caesura which refer to the constellations in Germanicus' translation are GPh 61 (Serpens), GPh 180 (Auriga), GPh 504 (Orion), GPh 567 (Capricornus, Imbrifer, Pisces), GPh 724 (Orion).

[38]Other lines using a 5½ caesura which refer to the constellations in Avienus' translation are AvPh 200 (Serpens and Arctos), AvPh 235 (Anguis), AvPh 236 (Serpens), AvPh 687 (Orion and Cepheus), AvPh 726 (Canis), AvPh 1115 (Virgo).

IV.

SOUND

  Sound, which may be defined in connection with poetry as the repeti-
tion of phonetic patterns, affords a second avenue for investigating the
influence of the Greek Phaenomena upon the Latin verse translations.[1]
The previous chapter has suggested that the translations were influenced
in places by their model in the use of metrical features. We will now try
to determine whether a similar process is evident in the area of sound.
Few would deny the importance of sound in poetry and that the beauty and
and meaning of a poem is often enhanced by the various sound components
of the words in the verses. Greek and Roman writers themselves stressed
the value of sound, and evidence attesting to the musical essence of po-
etry can be found in the works of various ancient critics. Aristotle,
for example, comments on the importance of the sound of words in a dis-
cussion of metaphors (Rhetoric 1405b16-18):

> τὰς δὲ μεταφορὰς ἐντεῦθεν οἰστέον, ἀπὸ καλῶν
> ἢ τῇ φωνῇ ἢ τῇ δυνάμει ἢ τῇ ὄψει ἢ ἄλλῃ τινὶ αἰσθήσει.

Cicero also concurs that words should be chosen for their sound (Orator
49.163):

> Verba, ut supra diximus, legenda sunt potissimum
> bene sonantia, sed ea non ut poetae exquisita ad so-
> num, sed sumpta de medio.

And Aulus Gellius further emphasizes the element of sound in poetry when
he reports the advice of Valerius Probus (Noctes Atticae 13.21.1):

129

> "Si aut uersum" inquit "pangis aut orationem
> solutam struis atque ea tibi uerba dicenda sunt,
> non finitiones illas praerancidas neque fetutinas
> grammaticas spectaueris, sed aurem tuam interroga,
> quo quid loco conueniat dicere; quod illa suaserit,
> id profecto erit rectissimum".

In ancient theory, the need to consult the ear was more important in the composition of literary works than the necessity of following "rotten" rules of grammar, _finitiones illas praerancidas_ . . . _fetutinas grammaticas_.

Modern critics of ancient poetry are also as confident of the importance of sound in ancient poetry as their Greek and Roman counterparts, but their attempts to explain a controversial and problematic subject are numerous and varied.[2] Several scholars, for example, have noted that greater clarification in the area of sound in ancient poetry would result from the undertaking of statistical studies of the various sound elements in Greek and Roman poems. This view has faced opposition from various critics on the grounds that such investigations are useless and contradictory to poetry, which itself cannot not be quantified.[3] The arguments of those who favor the use of statistical studies of sound in poetry, however, are more objective and convincing. Statistics, in their opinion, are useful in recognizing the existence of a stylistic procedure and allow a substitution of quantitative aspects of language for a qualitative appreciation.[4] Statistics, furthermore, allow an overall description of the aggregate behavior of poets.[5] Sound in poetry consists of many different aspects: alliteration, assonance, rhyme, homoeoteleuton, onomatopoeia, repetition, euphony and cacophony. But while most of them are readily quantified, only alliteration has widely attracted the formulation of statistics.[6] For this reason, we will confine ourselves to the study of

alliteration in this chapter.

Previous studies have concluded that alliteration cannot be totally the result of random distribution.[7] In this discussion, therefore, every alliteration in the Phaenomena and the Latin translations has been considered intentional; the argument that at least some alliteration is unintentional due to the nature of the Greek or Latin language, may be answered with the objection that for a poet who has mastered the demands of language and the mechanics of the hexameter line, no word and, therefore, no alliteration is really accidental. Alliteration is defined here as the repetition of the same consonants at the beginning of words in a verse.[8] In this context, consonants are identified as all letters except vowels and diphthongs.[9] This eliminates in Greek, the vowels α, ε, η, ι, ο, υ and ω and in Latin, a, e, vocalic i, o and vocalic u as well as diphthongs composed of these vowels in both languages. For the Latin poems, consonantal i, pronounced [y] and consonantal u, pronounced [w] have been included with the consonants. In this study, furthermore, a consonant has been assumed to alliterate only with itself,[10] and no consideration has been given to alliteration between certain consonants and their aspirated forms. In Greek, as a result, κ and χ π and φ, as well as τ and θ have not been considered alliterative pairs, and correspondingly, in Latin, c, p, and t do not alliterate with ch, ph and th respectively.[11] Cases in which an aspirated consonant alliterates with the same aspirated consonant, such as ch with ch, however, have been included in the investigation. The glottal fricative, h, is also absent from the list of alliterating consonants since it often appears to be only a kind of breathy modification of the following vowel.[12]

The importance of alliteration in Greek verse has been assumed at the outset, for while some scholars view alliteration as much more a feature of Latin poetry than of Greek poetry,[13] others conclude that conscious alliteration is also an essential feature of Greek poetry.[14] In fact, instances of alliteration are as numerous in Greek as in Latin poems and alliteration is present in noteworthy quantity in both the Greek Phae-nomena and the Latin translations, as the tables below will show. A variety of statistics, again intended to be observational and specific to our poems, are discussed below in order to provide information on the extent to which the four poems correspond and differ in the use of alliteration. Their purpose is to demonstrate the presence of alliteration, rather than its aesthetic value.

First, an examination of the total number of initial consonantal alliterations in each of the Phaenomena segments of the four poems provides some basic comparisons. The following table contains figures for the number of lines with alliteration and the frequencies for such lines.

TABLE I

	APh	CPh	GPh	AvPh
Total lines	730	542	724	1324
Number of lines with alliteration	237	286	315	604
Frequency of alliteration	32.5%	52.8%	43.5%	45.6%

These statistics indicate that the Latin translations are similar as a group in their treatment of initial consonantal alliteration, but differ from the original of Aratus which has a frequency of alliteration more than

ten percentage points lower than the translations.[15]

More specific information about the use of alliterations in the four poems can be obtained from the following table which contains statistics for the most common type of alliteration in the poems, the double alliteration, or the repetition of the same initial consonant in two words in a verse.[16]

TABLE II

	APh		CPh	GPh	AvPh
Total lines	730		542	724	1324
β	1				
κ	64	c	68	47	100
δ	16	d	3	12	19
		f	3	4	28
γ	1	g	1	–	–
		i	–	1	–
λ	1	l	12	5	13
μ	7	m	4	13	28
ν	4	n	15	15	16
π	45	p	30	52	70
		qu	3	3	8
		r	3	3	8
s	1	s	43	71	123
τ	28	t	9	17	28
		u	13	7	13
φ	1				
Total double alliterations	169		207	250	454

The most common double alliterations in APh, those with initial κ, may be compared in their sound pattern with the most commonly employed double alliterations in CPh, those with initial c; the percentage for alliterations witn initial c in CPh, however, is higher than the corresponding figure for initial κ in APh. In contrast, the most commonly used double alliteration in both GPh and AvPh involves initial s. The frequencies for the use of alliterations with initial s are, nevertheless,

similar in CPh (7.9%), GPh (9.8%) and AvPh (9.3%) and in strong contrast to initial s in APh (0.1%). In the use of double alliterations, therefore, the translations do not attempt, in general, to achieve the same alliterative emphasis as that found in the original. Furthermore, similarities among the Latin translations suggest either that the poets were influenced by Latin sound patterns, or that, after Cicero, each translator was influenced by his predecessor(s).

The following table provides statistics for triple alliterations, the repetition of the same initial consonants in three words in a line.

TABLE III

		APh		CPh	GPh	AvPh
Total lines		730		542	724	1324
	κ	16	c	15	8	18
	δ	2	d	1	–	1
			f	–	–	1
			l	2	–	–
	μ	2	m	1	–	3
			n	1	1	2
	π	7	p	3	3	13
			qu	1	–	–
			r	–	–	1
			s	9	8	23
	τ	4	t	2	5	4
			u	2	–	–
Total triple alliterations		31		37	25	66

These figures demonstrate clearly that triple alliterations are found with much less frequency than double alliterations. The most commonly employed triple alliterations in APh are those with initial κ, the same initial consonant most frequently found in double alliterations. CPh utilizes triple alliterations with initial c most frequently and, similarly, the most common double alliterations in CPh involve initial c. In GPh, the

most common triple alliterations are with the consonants s̲ and c̲, and, in comparison, the most common double alliterations are found with initial s̲. A̲v̲P̲h̲ uses the initial consonant s̲ most commonly in both triple alliterations and double alliterations in a single verse. With triple alliterations, unlike double alliterations, some statistical similarities are present among the poems. A̲P̲h̲ and C̲P̲h̲ use initial κ and initial c̲, respectively, with approximately the same frequency. The total frequency of usage for G̲P̲h̲ (3.5%) resembles that discovered for A̲P̲h̲ (4.2%), and, in fact, the frequencies for each of the poems are well within range of each other. Such similarities may indicate either that the translators were following the lead of Aratus or that triple alliterations were more difficult to achieve and less desirable in either language.

Because of this difficulty and because of a general dislike of excessive alliteration,[17] the poets use alliterations with four words in a verse very rarely, as the following table shows.

TABLE IV

	APh		CPh	GPh	AvPh
Total lines	730		542	724	1324
		c̲	2	1	1
δ	2				
		n̲	–	1	–
π	2	p̲	–	–	2
		s̲	–	–	1
τ	2				
Total alliterations with four words	6		2	2	4

In A̲P̲h̲, quadruple alliterations are found with δ, π and τ, two of which, τ and π, are among the most common double alliterations in the poem. In C̲P̲h̲, quadruple alliteration involves only initial c̲, also the consonant

used most frequently in the work in both double and triple alliterations.
In GPh, both c and n are used in alliterations with four words in a single
verse; by comparison, c is the third most common double alliteration and
c, together with s, is the most frequently employed triple alliteration.
In contrast, double alliterations with n in GPh are used with a frequency
of 2.1% while triple and quadruple alliterations with n are found with a
frequency of 0.1%. In AvPh, the consonant p is used most commonly in
verses with alliteration consisting of four words. This consonant is
the third most common double alliteration and also the third most common
triple alliteration in AvPh. The general tendency on the part of the
four poets, not surprisingly, is to use in quadruple alliterations con-
sonants which are common in both double and triple alliterations. Again,
a low total frequency of use for alliterations involving four words is
common to APh, CPh, GPh and AvPh.[18]

The four poems also contain examples of alliterative pairs, and
Table V on the following page presents complete information on such oc-
currences in order to demonstrate their diversity of use. The most com-
monly used alliterative pair in APh is δ-π. The most frequently employed
pair in CPh, by comparison, is c-s, a combination which unites the two
consonants most frequently used in double alliterations in CPh. The most
commonly employed alliterative pair in GPh, however, is composed of c and
t. AvPh, like CPh, combines consonants which were commonly used in double
alliterations in the alliterative pairs which are used most frequently,
c-s and p-s. CPh makes the greatest use of alliterative pairs (6.1%)
while GPh makes the least use (3.7%) and thereby resembles most closely
the total frequency found in APh (3.0%). Alliterative pairs, furthermore,

TABLE V

	APh		CPh	GPh	AvPh
Total lines	730		542	724	1324
κ-δ	3	c-d	1	–	1
		c-f	–	–	1
		c-l	2	–	1
		c-m	–	–	3
		c-n	3	2	1
κ-π	1	c-p	4	2	2
		c-r	1	1	–
κ-s	1	c-s	5	4	7
κ-τ	3	c-t	1	5	1
		c-u	1	2	2
δ-μ	1	d-m	–	1	–
	5	d-p	–	1	2
		d-s	1	–	–
δ-τ	2	d-t	–	–	1
		f-s	–	–	3
		f-t	1	–	1
		l-m	1	–	2
		l-p	1	–	1
		l-s	1	–	1
		m-p	–	–	2
		m-s	1	–	1
μ-τ	2	m-t	–	–	1
		m-u	–	–	1
		n-p	1	–	1
		n-s	–	1	4
		n-t	–	1	–
		n-u	1	–	–
	3	p-t	–	–	3
		p-q^u	–	1	–
		p-s	–	3	7
π-φ	1				
		p-u	1	–	2
		q^u-s	2	–	–
		r-s	–	–	2
		r-t	1	–	–
		s-t	2	3	3
		s-u	1	–	3
Total alliterative pairs	22		33	27	60

are used with total frequencies which closely resemble the total frequencies discovered for triple alliterations (Table III). Although the list of alliterative pairs is long and varied, it is clear that their use in the translations and in the original of Aratus is restricted in comparison with other alliterative effects.

Finally, the use of a double alliteration and a triple alliteration together in a single verse shows a similar but less extensive variety of combinations. These alliterations are noted in the following table by a single letter for the double alliteration and a letter with a superscript 3 for the triple alliterations.

TABLE VI

	APh		CPh	GPh	AvPh
Total lines	730		542	724	1324
$\kappa\text{-}\delta^3$	1				
$\kappa\text{-}\mu^3$	1				
$\kappa\text{-}\pi^3$	2	$c\text{-}p^3$	1	2	1
	-	$c\text{-}s^3$	1	-	-
	-	$c\text{-}t^3$	-	1	-
$\delta\text{-}\pi^3$	1	$d\text{-}p^3$	1	-	-
$\delta\text{-}\tau^3$	1				
	-	$f\text{-}c^3$	-	-	1
	-	$f\text{-}s^3$	-	-	1
	-	$l\text{-}c^3$	2	-	-
	-	$n\text{-}c^3$	-	-	1
	-	$p\text{-}s^3$	1	1	3
$\pi\text{-}\tau^3$	1				
	-	$qu\text{-}s^3$	-	-	1
	-	$r\text{-}c^3$	-	-	1
	-	$s\text{-}c^3$	1	-	2
	-	$s\text{-}n^3$	-	1	-
$s\text{-}\pi^3$	1	$s\text{-}p^3$	-	-	1
$\tau\text{-}\kappa^3$	1				
	-	$t\text{-}d^3$	-	-	1
	-	$t\text{-}s^3$	-	-	1
Total alliterative pairs and triple alliterations	9		7	5	14

The majority of these alliterative combinations occur only once, but repetitions are found for κ-π^3 (APh), l-c^3 (CPh), c-p^3 (GPh) and p-s^3 and s-c^3 (AvPh). The total frequencies for these elaborate alliterations are similar in the four poems, a result which may be due to the influence of the original upon the translations, or more likely, to a general unwillingness among both Greek and Latin poets to use this alliterative device extensively.[19]

Statistics do not provide conclusive evidence for any influence of the original of Aratus upon the translations in the area of initial consonantal alliteration, but a closer examination of individual lines and passages suggests that in many places the translators have borrowed the alliterative effect found in the Greek poem for inclusion in their own works. Lines from APh, CPh, GPh and AvPh have been considered to correspond in a common use of initial alliteration if alliteration with any consonant is present. In other words, even if a model line from APh has an alliteration with initial κ and the corresponding line in a translation has an alliteration with initial s, the corresponding verses have been designated as examples of the rendering of the alliterative effect since it is the occurrence of alliteration in parallel lines, not the individual letter, which is most important.[20] Evidence for the existence of verses from the Greek Phaenomena and the Latin translations which contain corresponding alliterations has never before been presented, and the correspondence suggests that alliteration also plays an important role in our understanding of Greek-to-Latin translation.

Examples of translated alliterations can be found in the four poems, and the eight instances tabulated below have been chosen to illustrate

parallel alliterative patterns between one translation and the original.

Consonants involved in the initial alliterations have been underlined.

APh and CPh[21]

> APh 342: Ἡ δὲ κυνὸς μεγάλοιο κατ' οὐρὴν ἕλκεται Ἀργώ

> CPh 126: At Canis ad caudam serpens prolabitur Argo,

> APh 352: ποσσὶν ὕπ' οὐραίοισι Κυνὸς προπάροιθεν ἰόντος.

> CPh 138: clari posteriora Canis uestigia tundit.

> APh 488: ἄκρηι σὺν κεφαλῆι καλοί τ' Ὀφιούχεοι ὦμοι

> CPh 259: ponit auis caput et clinato corpore tergum.

APh and GPh[22]

> APh 27: Ἄρκτοι ἅμα τροχόωσι (τὸ δὴ καλέονται Ἅμαξαι).

> GPh 25: siue Arctoe seu Romani cognominis Vrsae

> APh 589: πάντα φέρων ποταμὸν κέραος παρατείνεται ἄλλου.

> GPh 603: Cornua et Eridanus liquido feret utraque caelo.

APh and AvPh[23]

> APh 70: δεξιτεροῦ ποδὸς ἄκρον ἔχει σχολιοῖο Δράκοντος.

> AvPh 192: erigitur dextraeque dehinc inpressio plantae

> APh 197: αὐτοῦ γὰρ κἀκεῖνο κυλίνδεται αἰνὸν ἄγαλμα

> AvPh 459: Namque subest teretisque poli simul orbe rotatur

> APh 234: νειόθεν Ἀνδρομέδης· τὸ δ' ἐπὶ τρισὶν ἐστάθμηται

> AvPh 538: post tergum Andromedae. sic se tulit ordo dicatus.

In these examples, it is evident that the translated lines do not neces-
sarily use the same consonants in alliteration as the original line. Such
occurrences of translated alliterations render the alliterative effect

of the original verse and, for this reason, they are important.

More significantly, corresponding alliterations are also found in lines from the Greek original and two of the Latin translations. APh 56: ἀλλὰ δύο κροτάφους δύο δ' ὄμματα εἷς δ' ὑπένερθεν, which describes part of the constellation Draco, is similar to CPh IX.3: e trucibusque oculis duo feruida lumina flagrant and to GPh 56: Ardent ingentes oculi, caua tempora claris. APh 56 has a four-fold alliteration with initial δ in the words δύο . . . δύο δ' ὄμματα . . .δ' ὑπένερθεν. CPh IX.3, by comparison, uses only one word with initial d, duo, and instead makes use of a double alliteration with initial f in feruida . . . flagrant. GPh 56, in contrast, uses no word beginning with the consonant d, but employs a double alliteration with initial consonant c in the words caua . . . claris.

The line, APh 483: λαιῆ δὲ κνήμη καὶ ἀριστερὸς ὦμος ἐπ' αὐτῶι, from the section of the poem on the Tropic of Cancer, resembles, in a common use of alliteration, CPh 256: Hunc su[pe]ra laeua Perseus umeroque sinistro and GPh 462: Aurigae plantamque terit Perseida laeuam. APh 483 has a double alliteration with initial κ in κνήμη καὶ while CPh 256 contains a double alliteration with initial s in su[pe]ra . . . sinistro and GPh 462 possesses a double alliteration with a different consonant, p, in the words plantamque . . . Perseida. Although the consonants used in these double alliterations are not in agreement, it seems that the translators were influenced by the presence of the alliteration in the model verse to render the alliterative effect in their own lines.[24]

The Greek poem and the Latin translations of Cicero and Avienus provide further examples of corresponding alliterations. APh 43, which

is found in a discussion of the constellations Ursa Major and Ursa Minor

(the Bears): μειοτέρηι γὰρ πᾶσα περιστρέφεται στροφάλιγγι, is akin to

CPh VII.5: nam cursu interiore breui conuertitur orbe and to AvPh 133:

cardine nam toto conuertitur (haut mora longos). APh 43 has a double al-

literation with initial π in the words πᾶσα περιστρέφεται. CPh VII.5

contains a double alliteration with initial c in cursu . . . conuertitur

and AvPh 133 also has a double alliteration with c in the words car-

dine . . . conuertitur. CPh VII.5 and AvPh 133, therefore, share a use

of the double alliteration with c as well as the use of the word conuer-

titur in alliteration. Such correspondences suggests that Avienus was

influenced, perhaps, both by the original Greek line and by the trans-

lated line from CPh.

Another line APh 524: 'Ιππείη κεφαλῆ καὶ ὑπαύχενον εἰλίσσονται,

found in a discussion of those constellations on the Equator, is com-

parable to CPh 295: propter Equus capite et ceruicum lumine tangit and

to AvPh 1009: fulua aquila est. caput hic equus eminet hicque comanti.

APh 524 contains a double alliteration with κ in the words κεφαλῆ καί.

Correspondingly, CPh has a double alliteration with the initial consonant

c in capite . . . ceruicum, and AvPh 1009 has a double alliteration with

c in the words caput . . . comanti. A close point of agreement in each

of the three poems is that one of the two alliterating words in the cor-

responding lines means "head" (κεφαλή, capite and caput).

The highly alliterative line, APh 595: καὶ Προκύων πρότεροί τε

πόδες Κυνὸς αἰθομένοιο shares common alliterative features with CPh 378:

ante Canem: inde Canis uestigia prima uidentur and AvPh 1112: et pro-

cyon primique pedes canis ignicomantis. In these lines, which form part

of the account of those constellations which rise and set with the zodiacal sign of Leo, APh has a triple alliteration with π in Προκύων πρότεροί . . . πόδες and a double alliteration with initial κ in καὶ . . . Κυνός. CPh 378, by comparison, has two pairs of alliteration, one with the initial consonant c in the words Canem . . . Canis and one with initial consonantal u in the words uestigia . . . uidentur. AvPh 1112, like APh 595, however, has a triple alliteration with p in the words procyon primique pedes and, in fact, proves to be a very close translation of the Greek line:

καὶ Προκύων πρότεροί τε πόδες Κυνὸς αἰθομένοιο.

et procyon primique pedes canis ignicomantis.

Such a correspondence suggests strongly that the translators rendered both content and special effects, such as alliteration, in their own lines.[25]

The translation of alliterative effects found in the original also serves to unite the translations of Germanicus and Avienus with Aratus' poem. APh 35: Δικταῖοι Κούρητες ὅτε Κρόνον ἐψεύδοντο, found in the section dealing with the constellations Ursa Major and Ursa Minor, resembles GPh 38: Dictaeae texere deae famuli Corybantes and AvPh 113: Dictaeae longum latuit crepitacula rupis. APh 35 contains a double alliteration with κ in the words Κούρητες . . . Κρόνον, and GPh 38 contains a double alliteration with initial d in the words Dictaeae . . . deae. AvPh 113, in contrast, has a double alliteration with initial l in the words longum latuit. In these lines, the translators have rendered the alliterative effect, but not the alliterating consonant from the original verse; both innovation and dependence upon the original is therefore evident.

In the description of the signs of the zodiac, APh 557: νὺξ αἰεὶ

τετάνυσται, ὅσον τέ περ ἥμισυ κύκλου is comparable to GPh 570: Nullaque

nox bis terna minus caelo trahit astra and AvPh 1058: sex reparat. tanto

nox umida tempore semper. APh 557 contains a double alliteration with τ

in the words τετάνυσται . . . τέ and GPh 557 has a double alliteration with

the consonant t in the words terna . . . trahit and another double al-

literation with initial n in the words nullaque nox. AvPh 1058, like the

corresponding verses in APh and GPh, also has a double alliteration with

initial t, found in tanto . . . tempore. This double alliteration is one

of two alliterations in the line, the other of which uses the initial con-

sonant s in the words sex . . . semper.[26]

Finally, we may compare instances of the corresponding verses in

all four poems which contain alliterations. APh 266, a verse from the de-

scription of the Pleiades: ὅς σφισι καὶ θέρεος καὶ χείματος ἀρχομένοιο, is

the equivalent of CPh 40: et post, hiberni praepandens temporis ortus,

GPh 269: et cum surgit hiems portu fugienda peritis and AvPh 613: et cum

cana comas redit anno bruma rigenti. APh 266 possesses a double allitera-

tion with initial κ in the words καὶ . . . καί. CPh 40 has a double al-

literation with initial p in post . . . praepandens and GPh 269 also con-

tains a double alliteration with initial p in the words portu . . . peri-

tis. AvPh 613, in contrast, uses both a triple alliteration with c in the

words cum cana comas and a double alliteration with initial r in redit . . .

rigenti. Each of the translations agrees further in the position of the

word et as the first word in the verse.

A second example of alliterative agreement in all four poems is

present in APh 465: σήματα δ' εὖ μάλα πᾶσιν ἐπιρρήδην περίκειται (part of

the description of the four orbs), in CPh 241: quae densis distincta licebit

145

cernere signis, in GPh 452: Hi semper distant, illos communia signa and

in AvPh 932: scire sat est. quin signa etiam sunt quattuor istis. APh

465 contains a double alliteration with initial π in πᾶσιν . . . περίκειται.

CPh 241 has a double alliteration with initial d in the words densis dis-

tincta and GPh 452 contains a double alliteration with s in the words sem-

per signa. The alliteration in AvPh 932, however, is much more striking.

This line has a four-fold alliteration with initial s in the words scire

sat . . . signa . . . sunt plus a double alliteration with initial q in

the words quin . . . quattuor. The remaining words in the line contain

initial e and initial vocalic i: est, etiam and istis.

One final example of alliteration used in common in all four poems

demonstrates again both the dependence of the translations upon the orig-

inal of Aratus and their innovative use of the alliterative effect. APh 598,

from the narration of those constellations which rise and set with the sign

of Virgo: καὶ Δελφὶς δύνουσι καὶ εὐποίητος Ὀιστός resembles CPh 382: Del-

phinus, simul obtegitur depulsa Sagitta, GPh 613: Delphinus motis iam tum

deflexerit undis and AvPh 1117: cedit delphinus pelago ceditque sagitta.

APh 598 has two pairs of alliterations, one with initial δ in the words

Δελφὶς δύνουσι and another with initial κ in καὶ . . . καί. CPh 382 also

contains two pairs of alliterations, with initial d in the words Delphi-

nus . . . depulsa and with s in the words simul . . . Sagitta. GPh has one dou-

ble alliteration with initial d in Delphinus . . . deflexerit, but AvPh

1117 has a double alliteration with initial c in the repeated words, ce-

dit . . . ceditque. In this instance, CPh 382 most closely approximates

the alliterative effect found in APh 598, since each line contains two pairs

of alliteration, and of these pairs, one is a double alliteration with ini-

tial δ/d.[27]

Further evidence for the influence of alliterative features found
in the Greek original on the Latin translations can be obtained through
a more detailed examination of comparative passages in their entirety.
The following passages, descriptions of the interrelated constellations
of Corvus, Crater and Hydra, are the best examples of the deliberate use
of alliterative effects.[28] Rich and varied in their alliteration, they
present a picture of Corvus pecking with its sharp beak at the tail of
the Hydra, which, in turn, cradles Crater in its coils.[29] The original
passage, APh 443-449, is noticeably alliterative and onomatopoeic:

> Ἀλλ' ἔτι γὰρ καλὸν ἄλλο περαιόθεν ἕλκεται ἄστρον·
> Ὕδρην μιν καλέουσι· τὸ δὲ ζώοντι ἐοικός
> ἠνεκὲς εἰλεῖται, καί οἱ κεφαλὴ ὑπὸ μεσσον   445
> Καρκίνον ἰκνεῖται, σπείρη δ' ὑπὸ σῶμα Λέοντος,
> οὐρὴ δὲ κρέμαται ὑπὲρ αὐτοῦ Κενταύροιο.
> μέσσηι δὲ σπείρηι Κρητήρ, πυμάτηι δ' ἐπίκειται
> εἴδωλον Κόρακος σπείρην κόπτοντι ἐοικός.

The sound of κ is very prominent in the passage.[30] Words with initial con-
sonantal alliteration using this sound are καλόν (443), καλέουσι (444),
καί, κεφαλή (445), Καρκίνον (446), κρέμαται, Κενταύροιο (447), Κρητήρ
(448) and Κόρακος, κόπτοντι (449). Double alliterations with initial κ
are found in lines 445 (καί . . . κεφαλή), 447 (κρέμαται . . . Κενταύροιο)
and 449 (Κόρακος . . . κόπτοντι). In the passage, only four words with
initial κ are due to the use of proper names (Καρκίνον, Κενταύροιο, Κρητήρ
and Κόρακος), and these four instances are less than one half of the total
number of words which employ initial κ. The initial alliterations with
the consonant κ, furthermore, may be compared with other words in the passage
having non-initial κ: ἕλκεται, ἐοικός, ἠνεκὲς, ἰκνεῖται, ἐπίκειται,
Κόρακος and ἐοικός. The combined use of initial alliteration with κ and

non-initial κ sounds, therefore, gives this passage a distinctive sound

pattern which emphasizes the crowing of Corvus.

The translators have rendered this particular alliterative tone

from the Phaenomena in different ways. CPh 214-221, for example, makes

frequent use of the corresponding initial alliteration with c:[31]

> Hic sese infernis e partibus erigit Hydra,
> praecipiti lapsu flexo cum corpore serpens.
> Haec caput atque oculos torquens ad terga Nepai
> conuexoque sinu subiens inferna Leonis,
> Centaurum leui contingit lubrica cauda,
> in medioque sinu fulgens Creterra relucet;
> extremam nitens plumato corpore Coruus
> rostro tundit . . .

Words with initial c are emphasized in this passage: cum, corpore (215),

caput (216), conuexoque (217), Centaurum, contingit, cauda (218), Cre-

terra (219) and corpore, Coruus (220). Only three of these ten words

with initial c are proper names necessary for the identification of the

constellations (Centaurum, Creterra, Coruus), and this fact suggests that

words with initial c were included for a special effect. CPh 215, in

addition, contains a double alliteration with c in the words cum corpore,

and CPh 220 has a double alliteration with the same consonant in the words

corpore Coruus. CPh 218, furthermore, contains a triple alliteration with

c in the words Centaurum . . . contingit . . . cauda and a double allitera-

tion with initial l, which makes the line entirely alliterative. Such a

line is unusual, and indicative, perhaps, of an effort on Cicero's part

to match or surpass the alliterative features of the original line, APh 447,

which itself contains a double alliteration with κ.

Other instances of corresponding alliteration support further the

similarities between Cicero's translation of the passage and the lines

from the original. CPh 216, which has a double alliteration with t in the

words <u>torquens</u> . . . <u>terga</u>, is a translation of <u>APh</u> 445, which contains

a double alliteration with κ (καὶ . . . κεφαλή). Another double alliteration, in this case with initial <u>s</u>, is found in <u>CPh</u> 217 (<u>sinu subiens</u>); it

is a translation of the alliterative effect found in the corresponding

line, <u>APh</u> 446, which contains a similar alliteration with s in the words

σπεῖρη . . . σῶμα. This employment of alliteration of consonants other

than <u>c</u> in verses which correspond with verses from the original also con-

taining alliteration is indicative of the general importance of translat-

ing the alliterative effects found in the original of Aratus. But additional emphasis on the sound of <u>c</u> in <u>CPh</u> 214-221 can be seen in the use

of non-initial <u>c</u> in several words: <u>hic</u>, <u>praecipiti</u>, <u>haec</u>, <u>oculos</u>, <u>lubrica</u>

and <u>relucet</u>. In this translated passage, as in the Greek original, the

predominating <u>c</u> sounds stress the presence of the noisy Corvus, who is the

main character in the myth connected with these three constellations.[32]

The corresponding passage from Germanicus' translation is found

in <u>GPh</u> 426-432:

> Nec procul hinc Hydros trahitur, cui cauda superne
> Centaurum mulcet, tractu subit ille Leonem,
> peruenit ad Cancrum capite et tria sidera tangit.
> Huic primos tortus Crater premit, ulterioris
> uocali rostro Coruus forat. Omnia lucent,   430
> et Coruus pennis et paruo pondere Crater
> et spatio triplicis formatus sideris Hydros.

In this passage, a similar predominant use of the initial consonant <u>c</u> is

evident in the words: <u>cui</u>, <u>cauda</u> (426), <u>Centaurum</u> (427), <u>Cancrum</u>, <u>capite</u>

(428), <u>Crater</u> (429), <u>Coruus</u> (430) and <u>Coruus</u>, <u>Crater</u> (431). A noteworthy

point of departure from the earlier use of alliterating words in <u>APh</u> and

<u>CPh</u>, however, is obvious from the use of six out of the nine words which

begin with <u>c</u> for proper names connected with the three constellations,

Crater, Corvus and Centaurus. This emphasis limits somewhat the deliber-
ate nature of alliterations with initial c, but compensation is provided
by the presence of double alliterations with c in three of the seven lines
in the passage (426, 428, 431) and by the support of non-initial c sounds
in the words: nec, hinc, mulcet, tractu, huic, uocali, lucent and tripli-
cis. In comparison with CPh, which translates alliterative lines from
the Greek passage with similarly alliterative lines and with an artfully
contrived totally alliterative line (CPh 218), GPh renders the distinctive
alliterative features of the original passage by making use of more com-
plicated alliterative patterns in individual verses. GPh 428 contains
two pairs of alliterations, with initial c in the words Cancrum capite
and with initial t in the words tria . . . tangit. GPh 431 contains a
double alliteration with c in the words Coruus . . . Crater together with
a triple alliteration using initial p in pennis . . . paruo pondere. In
this line, the use of et in two places allows the verse an uneven balance
of two words and three words, with alliteration falling into a pattern of
et c p et p p c.

The overall effect of the c alliterations, however, is altered by
the final line in Germanicus' passage. Both Aratus and Cicero end the dis-
cussion of the constellations Crater, Corvus and Hydra by referring to the
Crow. Aratus writes (APh 449): εἴδωλον Κόρακος σπείρην κόπτοντι ἐοικός.
The crow here is likened to a figure striking at the coiled body of Hydra.
Cicero translates Aratus' line closely in CPh 220-221:

> extremam nitens plumato corpore Coruus
> rostro tundit . . .

The detail, nitens plumato, is not found in the Greek line, but Cicero main-
tains the image of striking by using the words rostro tundit. Germanicus,

in contrast, has placed the reference to the Crow near the middle of the
passage, in lines 429-430, where it ceases to provide the emphatic con-
clusion found in APh and CPh. He ends the passage instead with a refer-
ence to Hydra (GPh 432): et spatio triplicis formatus sideris Hydros.
This line contains a double alliteration with s in the words spatio . . .
sideris. By using an alliteration with s in the final line, Germanicus
transfers the parting emphasis from the Crow, associated with c allitera-
tions, to the Hydra whose slithering movement and hissing sounds are con-
nected with alliterations using initial s.

A similar alliterative emphasis is found in the corresponding
lines from Avienus' poem, AvPh 891-901:

> Desuper ingenti sese agmine prorigit hydra,
> quae prolata salo longe latus explicat aethra,
> in cancrum protenta caput, caudamque feroci
> Centauro inclinat, transit spatiosa leonis
> uiscera et ingenti sub uirgine summa quiescit.   895
> quin et eam spirare putes: sic agmina caelo
> lubrica conuoluit, sic spiras pendula torquet,
> sic et flammigero linguam iacit ore trisulcam.
> spirarum medio gestat cratera coruscum,
> ultima caeruleum sustentant agmina coruum,   900
> ales ut intento fodiat uaga uiscera rostro.

Words with initial c are abundant in the passage: Cancrum, caput, caudam-
que (893), Centauro (894), caelo (896), conuoluit (897), cratera, coruscum
(899) and caeruleum, coruum (900). Proper names beginning with c occur
only four out of ten times (cancrum, Centauro, cratera, coruum). In
this respect, AvPh 891-901 resembles CPh 214-221, which also uses proper
names beginning with c as infrequently as possible. Additional use of
the c sound comes from the use of words containing non-initial c: feroci,
inclinat, uiscera (twice), quiescit, sic (three times), lubrica, iacit,
trisulcam and coruscum. In addition, double alliterations with c are found

in AvPh 899 in <u>cratera coruscum</u> and AvPh 900 in <u>caeruleum</u> . . . <u>coruum</u>.

A triple alliteration with <u>c</u> is present in AvPh 893 in the words <u>can</u>-

<u>crum</u> . . . <u>caput, caudamque</u> and this line is furthermore a translation of

APh 445 which itself has a double alliteration with the corresponding

Greek consonant κ in the words καὶ . . . κεφαλή.

This passage from Avienus' translation, however, contains an im-

portant alliterative variation in lines 895-898. These lines, which de-

scribe specifically the figure of Hydra, are additional and without a

model in the Greek original. And they make use of alliterations with ini-

tial <u>s</u> in significant amounts.[33] AvPh 895 has a double alliteration with

<u>s</u> in the words <u>sub summa</u>; line 896 has a double alliteration with initial

<u>s</u> in <u>spirare sic</u> and line 897 has a double alliteration with <u>s</u> in the words

<u>sic spiras</u>.[34] In addition, the prominence of non-initial <u>s</u> sounds in this

portion of the passage (<u>uiscera</u>, <u>quiescit</u>, <u>putes</u>, <u>spiras</u>, <u>trisulcam</u>) sug-

gests further that Avienus here sought to emphasize the particular charac-

teristics of the snake-like Hydra in much the same way as Germanicus em-

phasized the Hydra by means of an alliteration with <u>s</u> in GPh 432. In-

dividual words beginning with <u>s</u> are particularly common, not only in the

description, but also throughout the entire passage (<u>sese</u>, <u>salo</u>, <u>spatiosa</u>,

<u>spirarum</u>, <u>sustentant</u>). In addition, words with non-initial <u>s</u> are also

present: <u>desuper</u>, <u>latus</u>, <u>transit</u>, <u>spatiosa</u>, <u>leonis</u>, <u>gestat</u>, <u>coruscum</u>,

<u>sustentat</u>, <u>ales</u>, <u>uiscera</u> and <u>rostro</u>. Avienus, therefore, has altered sub-

stantially the alliterative effect found in the original passage, for whereas

APh demonstrates a predominant use of κ, AvPh expands upon the use of <u>s</u>

first employed in the translations in GPh 432 and produces a passage in

which the <u>s</u> sound and the <u>c</u> sound have equal importance. Both sounds are

entwined, but special predominance is given to s sounds in AvPh 895-898,
a description of the Hydra. In all the passages, the final lines are
crucial to an understanding of the alliterative intent of each of the
four poets. Aratus (APh 449) uses a double alliteration with the pre-
dominating consonant κ, Cicero (CPh 220-221), a double alliteration with
the dominant consonant c and Germanicus (GPh 432) a double alliteration
with s. But Avienus (AvPh 901) ends the passage with a double alliteration
using consonantal u, uaga uiscera, words which help to conjure up the
maw of what seems to be in Avienus' description, a very voracious crow.[35]

In conclusion, closer investigation of individual lines and pas-
sages offers the reader what our statistics do not offer, namely, evidence
suggesting that the Latin translators were somehow influenced by the Greek
original of Aratus in the use of alliteration in their own works. As we
found in the previous discussion of metre, the results of statistical
data for alliteration are inconclusive; both similarities and differences
are evident in the poems. The translations diverge most clearly from the
Greek original in the employment of double alliterations, but in areas in
which the most art is required to achieve the alliterative effect (triple
alliterations, two pairs of alliterations and a triple plus a double al-
literation), there is greater similarity in alliterative patterning. Sta-
tistical methodology, therefore, forces us to go beyond quantitative analy-
sis to a qualitative examination of individual passages. From this we find
that the translators demonstrate an awareness of the alliterative features
of the model and, in some places, render the effect by using an allitera-
tion in parallel lines. But the Corvus-Crater-Hydra passage, remarkable
for its combination of alliteration and onomatopoeia, shows clearly that

the translators have taken an interest both in rendering the alliterative effects found in the original and in matching or excelling the interplay of word and sound in the Greek poem.

NOTES

[1]The definition is from D.I. Masson, "Sound in Poetry", <u>Princeton Encyclopedia of Poetry and Poetics</u>, enlarged ed. (1974), p. 784. In this chapter, the term "sound" has been chosen over the term "verbal music", defined as the subtle texture of vowel values as modified by consonants in L.P. Wilkinson, <u>Golden Latin Artistry</u> (Cambridge: Cambridge University Press, 1963), p. 41. Several reviewers have criticized Wilkinson's use of this term. E.L. Bassett in <u>CPh</u>, 59 (1964), pp. 207-208 calls verbal music a "baffling term" and criticizes Wilkinson for failing to clarify the connection, if any, of verbal music with rhythm. M.L. Clarke, in <u>CR</u>, 14 (1964), p. 60 interprets the term, verbal music, as the pursuit of euphony for its own sake. J.P. Elder in <u>AJPh</u>, 85 (1964), p. 202 refers to verbal music as a "touchy matter" and J.A. Richmond in <u>Gnomon</u>, 36 (1964), p. 260 interprets the term as the qualities in the sounds of poetry which give aesthetic pleasure.

[2]See, for example, N.I. Herescu, <u>La poésie latine: Étude des structures phoniques</u> (Paris: Les Belles Lettres, 1960), p. 137 where the author discusses sound in conjunction with ictus. Compare J. Marouzeau, <u>Traité de stylistique latine</u>, 2nd ed. (Paris: Société des études latines, 1946), p. 51 for an opposing view of various sound components.

[3]See N.I. Herescu, "Encore sur l'allitération latine", <u>Emerita</u>, 15 (1947), p. 86 and R.G. Austin, "Virgilian Assonance", <u>CQ</u>, 23 (1929), p. 52.

[4]J. André in a review of Herescu's <u>La poésie latine</u>, <u>RPh</u>, 36 (1962), p. 147.

[5]N.A. Greenberg, "Aspects of Alliteration: A Statistical Study", <u>Latomus</u>, 39 (1980), p. 611. J. Perret in a review of Herescu's <u>La poésie latine</u>, <u>REA</u>, 62 (1960), pp. 525-526 also calls for the use of statistics; he regrets Herescu's skepticism regarding numerical analysis.

[6]Recent works are Greenberg, "Aspects of Alliteration"; W.M. Clarke, "Intentional Alliteration in Vergil and Ovid", <u>Latomus</u>, 35 (1976), pp. 276-300 and "Intentional Alliteration and Rhyme in Vergil and Ovid", (Ph.D. dissertation: University of North Carolina, 1972). Compare also A. Cordier, <u>L'allitération latine, le procédé dans l'Énéide de Virgile</u> (Paris: Librairie Philosophique J. Vrin, 1939) which uses (p. 19) the older study by J. Kvičala, <u>Neue Beitraege zur Erklaerung der Aeneis</u> (Prague: F. Tempsky, 1881), pp. 293-447.

[7]Greenberg, "Aspects of Alliteration", p. 610 and Clarke, "Intentional Alliteration", p.300. Herescu, "Encore l'alliteration", p. 84 feels that it is difficult to tell where random alliteration ends and where intentional alliteration begins. Kvičala, pp. 293-294 states that alliteration is a deliberate technique sought for poetic effect by Roman poets.

[8]The term _alliteratio_ was coined by the Italian critic Pontano in the fifteenth century. His definition of the concept is found in C. Previtera, ed., G. Pontano: _I Dialoghi_ (Florence: Sansoni, 1943), pp. 181-182. Modern approaches to alliteration in ancient poetry fall into three categories: those which consider only initial alliteration, those which consider initial alliteration together with alliteration at the beginning of syllables and those which consider every recurrence of an alliterating consonant in the verse. Clarke in "Intentional Alliteration", p. 278 confines his discussion of alliteration to representatives of the same sound or sounds at the beginning of two or more words in a verse. Greenberg in "Aspects of Alliteration", p. 585 defines alliteration as the occurrence within a single hexameter verse of two or more words with the same initial letter. J. Marouzeau in _Lexique de la terminologie linguistique_ (Paris: Libraire Orientaliste P. Geuthner, 1933), p. 21 defines alliteration as the exact or approximate repetition of a phoneme or group of phonemes at the beginning of syllables or at the beginning of words in an expression. Cordier in _L'allitération latine_, p. 2 adopted this definition as the basis of his study, but Marouzeau in a review of Cordier's _L'allitération latine_, _REL_, 17 (1939), p. 407 criticized Cordier's use of his definition, for in his opinion the definition concerned the fact of alliteration, not the process of alliteration, which is the manner in which Cordier used the word. Wilkinson in _Golden Latin Artistry_, p. 25 admits that, although alliteration strictly applies to the initial letters of words, the beginning of syllables in words can also be considered in a discussion of alliteration. R.E. Deutsch in "The Pattern of Sound in Lucretius" (Ph.D. dissertation, Bryn Mawr College, 1939), p. 7 defines alliteration as every recurrence of the consonant within the line. Compare also G. Michenaud, "Les sons du vers Virgilien", _LEC_, 21 (1953), p. 343. W.J. Evans, _Alliteratio Latina_ (London: Williams and Norgate, 1921), p. 2 defines alliteration so as to cover every variety of internal sound repetition in a line. For other definitions of alliteration, see also I. Opelt, "Alliteration im Griechischen? Untersuchungen zur Dichtersprache des Nonnos von Panopolis", _Glotta_, 37 (1958), p. 208, n. 1.

[9]A more technical definition of consonant may be found in W.S. Allen, _Vox Latina_ (Cambridge: Cambridge University Press, 1965), p. 1. Consonants are defined by Allen as those sounds which habitually occur at low points, or the points of less prominence in an utterance.

[10]Cordier makes this point in _L'allitération latine_, p. 23.

[11]W.S. Allen in _Vox Graeca_ (Cambridge: Cambridge University Press 1974), p. 16, 18 writes that the difference between κ, π and τ and their aspirated forms κ, φ and θ is the presence of aspiration, or the production of a puff of breath or an audible type of "h sound" immediately following the consonant. In classical Greek, a χ was pronounced, therefore, as a κ + aspiration, not as velar [χ] or palatal [ç]. The letter φ was pronounced as π + aspiration, not as labio-dental [f] and the letter θ was pronounced as τ + aspiration, not as dental [θ]. Allen in _Vox Latina_, pp. 26-27 comments that in classical Latin, the pronunciations _ch_, _ph_ and _th_ were used primarily in transcribing Greek names and loan words contain-

ing χ, φ and θ. In these cases, educated Romans probably reproduced the
sounds of the Greek aspirates faithfully. In classical Latin, therefore,
the pronunciation of c, p and t would have been different from that of
ch, ph and th due to the need to pronounce the latter three sounds with
aspiration. There is no evidence, however, that in classical Latin, these
aspirated consonants were pronounced as velar [χ] or palatal [ç], labio-
dental [f] or dental [θ] respectively. See also E.H. Sturtevant, The Pro-
nunciation of Greek and Latin: The Sounds and Accents (Chicago: Univer-
sity of Chicago Press, 1920), pp. 70, 172 and J. Marouzeau, La prononcia-
tion du latin, 4th ed., (Paris: Les Belles Lettres, 1955), p. 24.

[12]Allen in Vox Latina, pp. 43, 44 writes that in initial position
"Latin h was more tenacious, but even here one finds omission and misap-
plication by the end of the republic . . . By the classical period in
fact, knowledge of where to pronounce an h had become a privilege of the
educated classes . . . The situation sometimes gave rise to uncertainty even in
the orthography . . ." Marouzeau, Prononciation, pp. 23-24 comments on
the tendency of initial h to be weak and R.G. Kent, The Sounds of Latin:
A Descriptive and Historical Phonology (Baltimore: Waverly Press, 1932),
pp. 56-57 mentions the weakness of both initial and inter-vocalic h and
the confusion surrounding its use.

[13]See Marouzeau, Traité de stylistique latine, p. 46. P. Chain-
traine in a review of Maruouzeau's book (1st. ed.) in REG, 49 (1936),
p. 497 states that the phonetic structure of Greek and Latin is different
and that alliteration is not linked to pronunciation in Greek as it is in
Latin. A fundamental difficulty exists, therefore, in applying Marouzeau's
tenets to Greek. U.K. Goldsmith, "Alliteration", Princeton Encyclopedia
of Poetry and Poetics, enlarged ed., (1974), p. 15 comments that ancient
Greek poetry, based on a quantitative metric, uses alliteration rarely
and only for special onomatopoeic effects; in Latin poetry, alliteration
is found throughout, from Saturnians on.

[14]See J. Defradas, "Le rôle de l'allitération dans la poésie grecque",
REA, 60 (1958), p. 37 and A. Shewan, "Alliteration and Assonance in Homer",
CPh, 20 (1925), p. 194.

[15]The higher frequency of alliteration in CPh, 52.8%, is interesting.
It would seem to indicate a greater interest in initial consonantal allitera-
tion on the part of Cicero.

[16]Comparison of these figures for alliteration found for the three
Latin verse translations of the Phaenomena with figures presented by other
scholars for various Latin authors cannot be made because other statis-
tics (determined for Lucretius, Vergil and Ovid, for example) are in a form
which allows no comparison. Greenberg, "Aspects of Alliteration", p. 609 lists
groups of two alliterations and three or more alliterations in a verse,
but makes no distinction between a double alliteration with c, for instance,
and a pair of alliterations with both c and s in a single verse. Clarke,
"Intentional Alliteration", lists statistics on alliterations in com-
binations of verse positions and (p. 298) instances of occurrence. The

determination of statistics in this chapter, however, is based on the oc-
currence of alliteration in individual verses and involves a more detailed
categorization.

[17] See the admonishment against excessive alliteration found
in Rhetorica ad Herennium 4.12.18.

[18] Alliteration in five words in a verse is extremely rare. See,
for example, GPh 152.

[19] For examples of the rare usage of three pairs of different al-
literating consonants in a verse see CPh 130, AvPh 277, AvPh 280, AvPh 568
and AvPh 863. For the equally rare usage of two triple alliterations in
a verse see CPh 309 and GPh 419. Examples of alliterations in a line
consisting of two pairs of alliterations plus a triple alliteration may
be found in APh 244 and GPh 587. Avienus provides the only example among
the poems of four alliterating words plus a double alliteration (AvPh 932).

[20] For a definition of parallel passages, see pp. 92-93, Chapter III,
"Metre", and Appendix II.

[21] Other examples of alliterations used in corresponding lines from
Cicero's translation and Aratus' poem can be found in:

APh 244 and CPh 15	APh 488 and CPh 259
APh 345 and CPh 128	APh 497 and CPh 269
APh 360 and CPh 147	APh 520 and CPh 292

[22] For the use of alliterations in parallel lines in Germanicus'
translation and the Greek poem, compare also:

APh 205 and GPh 207

[23] Other instances of correspondence in the use of alliteration in
parallel lines from Aratus' poem and Avienus' translation are present in:

APh 160 and AvPh 412	APh 335 and AvPh 741
APh 197 and AvPh 459	APh 531 and AvPh 1021
APh 239 and AvPh 551	APh 677 and AvPh 1232
APh 333 and AvPh 736	

[24] Compare also APh 446, CPh 217 and GPh 428.

[25] Compare also:

APh 172, CPh XXVIII.1, AvPh 434	APh 469, CPh 245, AvPh 937
APh 225, CPh XXXIII, AvPh 508	APh 539, CPh 311, AvPh 1031
APh 233, CPh 4, AvPh 527	APh 573, CPh 353, AvPh 1082
APh 277, CPh 50, AvPh 637	APh 604, CPh 390, AvPh 1126

[26] Compare also the following:

APh 203, GPh 205, AvPh 468   APh 606, GPh 621, AvPh 1125
APh 499, GPh 476, AvPh 976

[27] Examples of alliterative correspondence among all four poems can be found in:

APh 167, CPh XXVII, GPh 174, AvPh 422
APh 301, CPh 73, GPh 306, AvPh 671
APh 322, CPh 103, GPh 328, AvPh 718
APh 343, CPh 126, GPh 344, AvPh 756
APh 360, CPh 147, GPh 364, AvPh 788
APh 418, CPh 195, GPh 404, AvPh 864
APh 520, CPh 292, GPh 505, AvPh 1005
APh 525, CPh 296, GPh 512, AvPh 1012
APh 556, CPh 337, GPh 569, AvPh 1058

[28] Compare, among others, these examples of passages from the poems which use alliteration in notable amounts:

APh 45-62, CPh VIII-X, GPh 48-64, AvPh 138-168   (Draco)
APh 96-136, CPh XVI 5-6-XIX, GPh 96-139, AvPh 273-352   (Virgo)
APh 282-299, CPh 55-71, GPh 284-305, AvPh 645-668   (Aquarius, Capricorn)
APh 367-385, CPh 155-166, GPh 371-378, AvPh 807-822   (unnamed stars)
APh 389-401, CPh 170-182, GPh 382-392, AvPh 832-844   (unnamed-Hydor)
APh 462-468, CPh 237-244, GPh 446-454, AvPh 930-936   (four orbs)

[29] The remarkable incidence of alliteration in each of these four passages has garnered surprisingly little comment from modern critics. W.W. Ewbank, The Poems of Cicero (London: University of London Press, 1933), p. 184, n. 218 comments briefly only on Cicero's partiality for alliteration as seen in CPh 218. D.B. Gain, ed., The Aratus Ascribed to Germanicus Caesar (London: The Athlone Press, University of London, 1976), p. 105, n. 431 notes only that Germanicus was influenced (line 431) by a desire for alliteration.

[30] Compare the sound of the harsh croaking of the frog chorus in Aristophanes, Frogs 209: βρεκεκεκὲξ κοὰξ κοάξ. The sound κ predominates. There is some debate over the sound component of onomatopoeia. Marouzeau, Traité, p. 24 states: "Les sons ont une valeur expressive, définie par le rapport qu'on perçoit entre les sonorités, d'une part, et, d'autre part, les émotions, les notions, les évocations incluses dans l'énoncé". Wilkinson, Golden Latin Artistry, p. 52 notes that it is important not to suggest that the sounds themselves have particular expressive qualities. In "Onomatopoeia and the Sceptics", CQ, 36 (1942), p. 122, Wilkinson stresses that onomatopoeia is only a reinforcement of semantic communication, not an independent instrument. The discussion of the four passages with respect to their alliterative effects imputes no universal significance to the alliterating consonants. Such consonants must always be considered in context or, in other words, sound can never be divorced from sense.

[31] Compare the sound of insects in Vergil's Georgic 3.328: et cantu querulae rumpent arbusta cicadae. This line has a double alliteration with c in the words cantu . . . cicadae.

[32] Scholia Basileensia, which may be found in A. Breysig, ed., Germanici Caesaris Aratea Cum Scholiis (Hildesheim: Georg Olms Verlagsbuchhandlung, 1867, repr. 1967), contains (pp. 100-101) the myth of Corvus.

[33] Quintilian, Institutio Oratoria 12.10.32 calls the letter s, absona, "discordant". For a similar use of s in poetry, compare Vergil, Aeneid 2.207-211. Compare also B.M.W. Knox, "The Serpent and the Flame: The Imagery of the second Book of the Aeneid", AJPh, 71 (1950), p. 379 on the common comparison of the serpent and the flame in Latin literature. Avienus uses the phrase flammigero ore in connection with the serpent, Hydra, in AvPh 898.

[34] Double alliterations with s are used much more infrequently in the other two verse translations. See, for example, CPh 217 (sinu . . . subiens) and GPh 432 (spatio . . . sideris).

[35] Quintilian, Institutio Oratoria 12.10.29 gives his opinion of the sound of consonantal u. His use of the verb persequitur indicates that he had a low opinion of the sound.

V.

COMPOUND ADJECTIVES AND EPITHETS

If poetry may be defined as the interplay of word, sound and mean-
ing, then an important aspect of poetic technique in the art of translation
is the use of descriptive words. Compound adjectives and epithets are
words which describe or qualify a noun, that is, words which are not essen-
tial to the content of the poem but which offer the translator the opportun-
ity for flexibility and originality. The use of compound adjectives and
epithets in the Latin translations is a distinguishing feature which immedi-
ately demonstrates a difference or divergence from the original.[1] In this
chapter, we will investigate the use of compound adjectives and epithets in
the translations in order to determine how such adjectives are employed in
the translation of a Greek adjective and to what extent the translations were
faithful to the Greek original or innovative in the use of these descriptive
words.

Compound adjectives have been identified in this discussion as adjec-
tives formed from two independent roots, not including adjectives formed
from a root plus a preposition or an inseparable prefix; the word fluctiuagus,
therefore, has been defined as a compound adjective while the word illustris,
for example, has not been included in this group. The following table pre-
sents information on the use of compound adjectives in the Phaenomena seg-
ments of the four translations. Statistics, again only intended to be ob-
servational and specific to the translations of the Phaenomena of Aratus,
are given for additional compound adjectives used with no corresponding ad-

jective in the Greek poem, for compound adjectives which render a corresponding Greek adjective but do not translate it and for compound adjectives which are close translations of a corresponding adjective in the original. The prose Aratus Latinus, designated as ALPh, has been included with the other three translations of Aratus' poem.

TABLE I

	CPh	GPh	AvPh	ALPh
Total number of words	3468	4641	8537	4123
Additional compound adjectives	11	10	35	0
Frequency	0.3%	0.2%	0.4%	0
Not exact translations	4	3	3	3
Frequency	0.1%	0.1%	0.04%	0.1%
Close translations	4	0	5	4
Frequency	0.1%	0	0.1%	0.1%
Total compound adjectives	19	13	43	7
Frequency per total words	0.5%	0.3%	0.5%	0.2%

These statistics indicate that frequencies for the total number of compound adjectives found in the four translations are comparable.[2] More importantly, however, the greatest relative prominence is given to compound adjectives in CPh, GPh and AvPh which are additional and without equivalent in APh. ALPh, by comparison, contains no additional compound adjectives. But since this translation is a word-for-word rendering of the Greek poem, the omission of additional adjectives is not surprising.

Similar observations may be drawn from statistics compiled for

CPr, GFr, AvPr and ALPr (the Prognostica portion of the Aratus Latinus).

TABLE II

	CPr	GFr	AvPr	ALPr
Total number of words	168	1387	3501	2351
Additional compound adjectives	4	5	16	0
Frequency	2.4%	0.4%	0.5%	0
Not exact translations	0	0	0	0
Frequency	0	0	0	0
Close translations	0	0	1	2
Frequency	0	0	0.03%	0.1%
Total compound adjectives	4	5	17	2
Frequency per total words	2.4%	0.4%	0.5%	0.1%

The total frequencies found for the Prognostica portions of the poems are in general agreement with the corresponding figures noted in Table I.[3] But the relatively high frequency for compound adjectives in CPr in comparison with CPh and AvPr is most likely due to the fragmentary state of CPr itself. CPr and AvPr, however, emphasize additional compound adjectives over compound adjectives from the other two categories, and in this respect, resemble CPh and AvPh. ALPr, like ALPh, uses no additional compound adjectives, thereby demonstrating more clearly its uerbum de uerbo nature.

A non-statistical investigation of all compound adjectives, on the other hand, provides a better indication of the variety of compound adjec-

tives, and especially additional compound adjectives, used in the four

Latin translations. Nineteen compound adjectives are present in CPh,

eleven of which are additional words which have no equivalent in the

original APh:

CPh 320: aestifer   CPh 211: quadrupes

CPh 122: horrificus   CPh 59: semifer

CPh 88: ignifer   CPh 318,
                                       340, 363: signifer
CPh 121: leuipes
                                       CPh 238: stelliger
CPh 432: mortifer

Four other compound adjectives in CPh render a Greek adjective, but do not

translate the word exactly. The compound adjective aestifer (CPh 111) re-

places the Greek word πεφάσμενος (APh 328), horrisonus (CPh 13) the word

κατίων (APh 241), spiniger (CPh 178) the word κυάνεος (APh 398) and squami-

fer (CPh 328) the word ἀστερόεις (APh 548). The remaining four compound ad-

jectives found in CPh are close translations of a corresponding Greek adjec-

tive. Clarisonus (CPh 280) is a translation of the Greek adjective καθαρός

(APh 507); corniger (CPh XXVII.1) translates the Greek words κεραός and πε-

πτηώς (APh 167); quadruplex (CPh 93) renders closely the Greek word τέσσαρες

(APh 317) and signipotens (CPh 475) translates the adjective ἀστέριος (APh

695). It is noteworthy that these compound adjectives in CPh are transla-

tions of ordinary Greek adjectives and not Greek compound adjectives.[4]

Similar treatment of compound adjectives is apparent in GPh where

ten of the thirteen compound adjectives are additional with no equivalents

in APh:

GPh 524: aestifer   GPh 23: horrifer

GPh 254: aliger   GPh 101, 159: quadrupes

GPh 306: belliger   GPh 526: signifer

GPh 264: caelifer   GPh 52: squamiger

GPh 536: corniger

Three of these compound adjectives (aestifer, quadrupes and signifer) are
used in common with CPh. In addition, the three remaining compound adjec-
tives in GPh are replacements, not close translations, for corresponding
words in APh: armiger (GPh 688) for Ὄρνις (APh 691), sonipes (GPh 418)
for ἱππόῤαιος (APh 438) and squamiger (GPh 390) for κυάνεος (APh 398).
Unlike CPh, however, GPh possesses no compound adjectives which translate
closely adjectives from the corresponding line in the Greek original.[5]

Most of the compound adjectives in AvPh, in comparison, are addi-
tional and without equivalents in APh. Out of a total of forty-three com-
pound adjectives in AvPh, thirty-five are used independently of the model
verse:

AvPh 275: astriger   AvPh 979: imbrifer

AvPh 886: caelicolus   AvPh 342: malesuadus

AvPh 575: caelifer   AvPh 858: nimbifer

AvPh 972, 1046: flammifer   AvPh 1185: nubifer

AvPh 114, 126, 382,   AvPh 795: omniparens
   392, 604, 898: flammiger
                              AvPh 105, 217: omnipotens
AvPh 1000: floricomus
                              AvPh 728: pestifer
AvPh 1158: fluctigenus
                              AvPh 651, 719, 1034
AvPh 96: horrifer   1038, 1042, 1053: signifer

AvPh 825: horrificus   AvPh 409: stelliger

AvPh 787: ignifer   AvPh 69: ueliuolus

AvPh 710: ignipotens   AvPh 62, 852: umbrifer

Avienus employs more compound adjectives than Cicero and Germanicus. Furthermore, he shows considerable independence of the earlier translators in the use of different compound adjectives, sharing a common use of only three compound adjectives with GPh: caelifer, horrifer and signifer, and four with CPh: horrificus, ignifer, signifer and stelliger. Three examples of compound adjectives which correspond to a Greek adjective but do not translate it are found in AvPh: fluctiuagus (AvPh 664) for μαλκιδων (APh 294), luciparens (APh 854) for ἀρχαῖος (APh 408) and armiger (AvPh 1008) for Ἀἰητός (APh 522). Finally, AvPh provides five instances where compound adjectives are close translations of Greek adjectives in corresponding lines. Flammiger (AvPh 533) is a translation of the Greek εὐάστερος (APh 237) and in AvPh 725, closely renders the word ποικίλος (APh 328). Frugiparus (AvPh 1054) translates ἐπικάρπιος (APh 552), ignicomans (AvPh 1112) the word αἰθόμενος (APh 595), and serenifer (AvPh 989) the adjective καθαρός (APh 507).[6]

In contrast to AvPh, ALPh contains fewer and less varied compound adjectives.[7] The adjective uniformis (ALPh 370) is a poor translation of the corresponding Greek word νώνυμος (APh 370), but in three other instances compound adjectives in ALPh are close translations of Greek adjectives in the corresponding lines: bipertitus (ALPh 78, 471) for διχόμηνος (APh 78, 471) and magnificus (ALPh 680) for μέγας (APh 680). ALPh, however, contains several instances where Latin compound adjectives translate Greek compound forms: multiformis (ALPh 668) is a translation of the Greek compound adjective πολυτειρής (APh 668),[8] terrigenus (ALPh 101) translates ἐπιχθόνιος (APh 101) and ueneficus (ALPh 131) the word κακοεργός (APh 131).[9] In this respect, ALPh differs from the earlier verse translations of Aratus' poem. Only ALPh, of all the translations, renders compound adjective with compound adjective.

The <u>Prognostica</u> halves of the Latin translations, however, use compound adjectives less frequently. In <u>CPr</u>, for example, only four additional compound adjectives are found: <u>caprigenus</u> (<u>CPr</u> VI), <u>mollipes</u> (<u>CPr</u> IV.10), <u>tristificus</u> (<u>CPr</u> III.4) and <u>umifer</u> (<u>CPr</u> IV.11).[10] More examples of compound adjectives are present in <u>AvPr</u>, but only one, <u>serenifer</u> (<u>AvPr</u> 1739) translates a Greek word (φθίνων, <u>APh</u> 998). The remaining compound adjectives in <u>AvPr</u> are additional and without equivalents in the original <u>APr</u>:[11]

<u>AvPr</u> 1435, 1557, 1633: <u>flammiger</u>	<u>AvPr</u> 1684: <u>latipes</u>
<u>AvPr</u> 1763: <u>floricomus</u>	<u>AvPr</u> 1547, 1634: <u>lucifer</u>
<u>AvPr</u> 1807: <u>frugifer</u>	<u>AvPr</u> 1436: <u>noctiuagus</u>
<u>AvPr</u> 1413: <u>ignicomans</u>	<u>AvPr</u> 1390: <u>raucisonus</u>
<u>AvPr</u> 1605: <u>ignifer</u>	<u>AvPr</u> 1353: <u>signifer</u>
<u>AvPr</u> 1804: <u>laniger</u>	<u>AvPr</u> 1517, 1550: <u>umbrifer</u>

Compound adjectives are less prominent in <u>AvPr</u> than in <u>AvPh</u>, but seven of these twelve adjectives are used in common in both <u>AvPr</u> and <u>AvPh</u>: <u>flammiger</u>, <u>floricomus</u>, <u>ignicomans</u>, <u>ignifer</u>, <u>laniger</u>, <u>signifer</u> and <u>umbrifer</u>. The remaining compound adjectives, used only in <u>AvPr</u>, derive from the astro-meteorological subject matter found in the last half of the poem. Finally, in <u>ALPr</u>, two instances of one compound adjective, in each case a close translation of a Greek adjective in the corresponding line from <u>APr</u>, are present: <u>multiplex</u> (<u>ALPr</u> 774, 799) is used to translate πληθύς (<u>APr</u> 774, 799).[12] No translation of a Greek compound adjective with a corresponding Latin adjective, however, is present in <u>ALPr</u>.

The translators, furthermore, demonstrate their independent approach

to compound adjectives through their emphasis on different categories of such adjectives. The following table indicates that in the translations compound adjectives are divisible into three distinct groups: compound adjectives which end in -fer, those which end in -ger and those which have other endings such as -pes or -sonus.

TABLE III

	CPh	GPh	AvPh	ALPh
-fer	9	4	18	0
-ger	3	6	10	0
Other endings	7	3	15	7
Total	19	13	43	7

	CPr	GFr	AvPr	ALPr
-fer	1	3	8	0
-ger	0	1	4	0
Other endings	3	0	5	2
Total	4	4	17	2

CPh, GFr, AvPh and AvPr all use compound adjectives ending with -fer most frequently while GPh makes more frequent use of compound adjectives ending with -ger. CPr, ALPh and ALPr employ more compound adjectives composed with endings other than -fer and -ger.[13] CPh, AvPh and AvPr in fact share a common hierarchy of compound adjectives with these three types of endings since in each, compound adjectives are present in a descending order from those ending with -fer, those with other endings and those with final -ger. This result may be a fortuitous occurrence or, perhaps, evidence for some intentional effort on the part of Avienus to follow Cicero's pattern.

Finally, we may examine and compare the degree of innovation present in the use of compound adjectives in each of the four Latin translations. The employment of compound adjectives in Cicero's translation shows that Cicero not only drew on vocabulary established by previous Latin authors but also originated several new compound adjectives. Some compound adjectives are derived from the works of previous Latin authors: mortifer, quadrupes, quadruplex and signifer.[14] Others are first found in his translation: aestifer, clarisonus, corniger, horrificus, horrisonus, ignifer, levipes, semifer, spiniger, squamifer, stelliger and tristificus.[15] Three words, in addition, are used in Latin literature only in Cicero's translation of Aratus' poem: mollipes, signipotens and umifer.[16] By means of such innovation, Cicero may be said to have provided a lexical model which was to be followed by one of the later Latin translators.

The translation of Germanicus depends totally on compound adjectives which were already in use in Latin literature. Aestifer, corniger and squamiger were first used in Cicero's translation, while aliger, armiger, belliger, caelifer, frugifer, horrifer, letifer, pestifer, quadrupes, signifer and sonipes were either already in existence in Latin before Germanicus undertook his translation or current in Augustan poetry.[17] Germanicus, content with the store of compound adjectives already in existence in the language, created no new compound adjectives for his own poem.

The translation of Avienus resembles that of Cicero in its innovative use of compound adjectives. Many compound adjectives from Avienus' poem have earlier histories in Latin literature: astriger, caelicolus, caelifer, flammifer, flammiger, fluctiuagus, frugifer, horrifer, horrificus, ignifer,

ignipotens, imbrifer, lucifer, malesuadus, nimbifer, noctiuagus, nubifer, omniparens, omnipotens, opifex, pestifer, raucisonus, signifer, stelliger, ueliuolus and umbrifer;[18] of these, horrificus, ignifer and stelliger were found first in Cicero's translation. But seven compound adjectives are unique to Avienus' translation: floricomus, fluctigenus, frugiparus, ignicomans, latipes, luciparens and serenifer.[19] The presence of this group of compound adjectives is an indication of Avienus' innovative approach to compound adjectives, for in spite of the fact that he was able to draw from an ever increasing stock of such adjectives, he was still able to create new compound adjectives for his translation.

The author of the Aratus Latinus, however, draws only from compound adjectives which were found earlier in Latin literature: bipertitus, magnificus, multiformis, multiplex, terrigenus, uenificus and uniformis.[20] This late translation displays as little originality in the use of compound adjectives as Germanicus' poem. Compound adjectives, therefore, provide a useful means of measuring the descriptive nature of the translations of Aratus' Phaenomena. They are indications of innovation, difference of approach and independence from the original work.

Epithets are a distinct descriptive part of Greek and Latin poetry,[21] and, like compound adjectives, their use in the translations diverges in places from their use in the original of Aratus. Since epithets in the Greek poem and the Latin translations are plentiful, discussion will be limited to the epithets which are used to qualify selected proper names found in the initial Phaenomena segments of the poems. These epithets may be placed in seven descriptive categories: brightness, moral quality, physical characteristics, size, origin or ancestry, location and color. A final category,

entitled "other", has been used to identify epithets which do not belong
to the previous seven categories. Individual lists of epithets placed
in these categories may be found at the end of this chapter. The follow-
ing table provides information on the epithets found with forty-one names
for the constellations as well as with the names Zeus and the Sun.

TABLE IV

	APh	CPh	GPh	AvPh	ALPh
Brightness	16	26	10	17	6
Moral quality	6	13	20	16	2
Physical characteristics	13	9	20	27	3
Size	7	7	5	7	7
Origin or ancestry	4	3	9	18	1
Location	3	1	2	3	2
Color	2	1	2	4	0
Other	3	2	5	3	0
Total	54	62	73	95	21

This table demonstrates clearly some of the differences among the original
and the four translations in the use of epithets connected with proper
names. For the forty-three names under discussion, AvPh contains the great-
est number of descriptive epithets while ALPh exhibits the smallest number.[22]
The second most frequent use of epithets can be found in GPh and the least
use of epithets among the verse translations is evident in CPh. But, in com-
parison with the Latin verse translations, APh itself contains the fewest de-
scriptive epithets.

A closer examination of the figures found in the table shows that epi-
thets describing brightness, such as εὐφεγγέος (Ὠρίωνος) (APh 518), are most

common in the original of Aratus. Similarly, in CPh epithets of bright-
ness such as fulgens Argo (CPh 396) are used most frequently. GPh, how-
ever, gives preference to epithets describing both physical characteris-
tics, such as squamigerae Pristis (GPh 390), and moral quality, such as
pius Chiron (GPh 421). In AvPh, in comparison, epithets denoting physical
characteristics, uilloso leone (AvPh 1103), are most prominent. Finally,
ALPh, while emphasizing epithets describing size, gives almost equal promi-
nence to epithets designating brightness, which brings it into agreement
with APh. ALPh 636, for example, contains an epithet of size, magnum Orio-
nem, and ALPh 518 an epithet describing brightness, zona dilucida Orionis.[23]

The emphasis, however, in the translations and in the original on
different categories of descriptive epithets shows that particularized epi-
thets are employed with great flexibility in the Latin verse translations
but not in the Aratus Latinus.[24] The epithets used in connection with the
constellations Cetus and Orion, for example, display the descriptive inde-
pendence of the translations from the original poem. In APh Cetus is given
three different epithets: μέγας, "large" (APh 354); αἰθέριος, "high in the
air" (APh 390, 720); and κυάνεος, "blue" (APh 398). These epithets fall in
the three categories of size, location and color.

Cetus, in contrast, is described with four epithets in CPh, three
of which are independent of the original: explorans, "searching out" (CPh
140); ferus, "cruel" (CPh 140, 413); caeruleus, "blue" (CPh 275) and Nep-
tunius, "of the god Neptune" (CPh 436). One of the lines, CPh 140, is a trans-
lation of a line from the original (APh 354), but in it Cicero employs two
epithets to describe the quest of the monster (the category "other") and its
cruel nature (the category of moral quality).[25] Only the epithet caeruleus,

like Greek κυάνεος, falls under the category of color, but <u>Neptunius</u>, describing origin or ancestry, has no equivalent in <u>APh</u>.

Three different epithets are used in <u>GPh</u> to describe Cetus: <u>Nereius</u>, "pertaining to Nereus" (<u>GPh</u> 356); <u>aequoreus</u>, "belonging to the sea" (<u>GPh</u> 371) and <u>squamigerus</u>, "scaly" (<u>GPh</u> 390). Germanicus translates the Greek epithet μέγας (<u>APh</u> 354) with an epithet describing origin or ancestry, <u>Nereius</u>, and the Greek κυάνεος (<u>APh</u> 398) with an epithet describing physical characteristics, <u>squamigerus</u>.[26] <u>Aequoreus</u> denotes place of origin and has no equivalent in either <u>APh</u> or <u>CPh</u>.

The translation of Avienus shares epithets from the same categories with the translations of Germanicus and Cicero. Cetus is qualified by the epithets <u>Nereius</u> (<u>AvPh</u> 775), which may be compared with the same word found in <u>GPh</u> 356, <u>undicola</u>, "inhabiting the waves" (<u>AvPh</u> 809), <u>horrificus</u>, "dreadful" (<u>AvPh</u> 825) and <u>caeruleus</u>, "blue" (<u>AvPh</u> 981), which may be compared to <u>CPh</u> 275. Avienus, like Germanicus, uses epithets from the categories of origin or ancestry (<u>Nereius</u>), location (<u>undicola</u>) and physical characteristics (<u>horrificus</u>), and, in agreement with Cicero, one epithet from the group denoting color (<u>caeruleus</u>).

The <u>Aratus Latinus</u>, in contrast, uses the original of Aratus, not the previous Latin translations, as a model for the use of epithets. The epithet <u>magnus</u>, "large" (<u>ALPh</u> 354), translates the Greek epithet μέγας (<u>APh</u> 354) and <u>aetherius</u> (<u>ALPh</u> 390) transliterates the Greek αἰθέριος (<u>APh</u> 390). Independence from the original in the area of epithets and the distinct descriptive quality of epithets found in the earlier translations is not evident in this prose work.

A similar flexibility of description in the translations and the

original of Aratus may be detected for the constellation Orion. APh has three epithets for this constellation: εὐφεγγής, "bright" (APh 518); μέγας, "large" (APh 636) and καρτερός, "strong" (APh 639). For Orion, Aratus uses epithets, therefore, from the categories of brightness, size and physical characteristics. CPh, unlike APh, uses two epithets of brightness to describe Orion, nitens (CPh 102) and fulgens (CPh 368),[27] as well as an epithet of size, ingens, "huge" (CPh 290). But innovation in the use of epithets is evident in two epithets from the category of moral quality, amens, "senseless" (CPh 421) and uaecors, "mad" (CPh 424). GPh, similarly, uses an epithet from the same category to describe Orion as flebilis, "pitiable" (GPh 658), because of the suffering he experiences as a result of his crime against Diana.

In contrast, AvPh contains six different epithets for Orion. Two of these refer to the brightness of the constellation: rutilus (AvPh 526, 801, 1316) and rutilans (AvPh 1100).[28] Two epithets refer to its size: magnus (AvPh 747) and ingens (AvPh 1170). Two other epithets, however, have been taken from the category describing moral qualities: trux, "fierce" (AvPh 249) and formidatus, "feared" (AvPh 584).[29] Each of the three verse translations, therefore, diverge from the original in their depiction of Orion, who is judged on the basis of some moral quality. But ALPh follows APh closely by describing Orion only with epithets of brightness and size: dilucidus (ALPh 518) and magnus (ALPh 636). These two epithets closely translate Greek epithets in the corresponding lines. Only three epithets from the verse translations, in comparison, are translations of corresponding Greek epithets: ingens (CPh 290) for εὐφεγγής (APh 518), uaecors (CPh 424) for καρτερός (APh 639) and ingens (AvPh 1170) for μέγας

(APh 636). The verse translators were more innovative in their use of epithets to describe proper names than the anonymous translator who rendered the Greek original in prose.

This chapter, in conclusion, further illuminates the important differences between sensus de sensu and uerbum de uerbo translation. Compound adjectives demonstrate the independence of the verse translations from the original of Aratus. The majority of compound adjectives in use in CPh, GPh, AvPh, CPr and AvPr are additional and without equivalents in APh or APr, but ALPh and ALPr, in keeping with their uerbum de uerbo nature, use no additional compound adjectives. The verse translators, in addition, show a different approach to compound adjectives through their individual emphases on adjectives with final -fer, -ger and other endings. But, since several compound adjectives first appear in their own poems, Cicero and Avienus handle compound adjectives with greater originality than Germanicus and the author of the Aratus Latinus. Epithets, a second type of descriptive adjective, also display the flexibility of the verse translators in comparison with the original and the prose translation. Each of the Latin verse translations emphasizes epithets in different categories while only the prose ALPh remains faithful to APh in its choice of epithets. Clearly, the wide lexical variety in the verse translations is evidence that the Latin poets attempted to go beyond their model and create a new Phaenomena of their own.

TABLE A

EPITHETS IN <u>APh</u>

<u>Brightness</u>

αἰθόμενος	519, 595
αἶθοψ	697
αἰόλος	275
ἀστερόεις	358, 548
γλαυκός	369
εὐφεγγής	518
παμφανόων	434
ποικίλος	328
πολυτειρής	604, 668, 686
χαροπός	594
φαεινόμενος	76, 189

<u>Moral Quality</u>

ἀγαυός	392
δειλός	654
ἱερός	215
μογερός	577
πολύκλαυτος	360
πότνια	263

<u>Physical Characteristics</u>

δινωτός	440
ἐλαφρός	506, 519
εὐποίητος	598
ἠερόεις	317
καρτερός	639
κεραός	167
μετασκαίρων	282
πεπτηώς	167
πολυσκεπτής	136
πτερόεις	691
σκολιός	70, 187

<u>Size</u>

μέγας	31, 89, 354, 402 505, 636
ὀλίγος	268

<u>Ancestry or Origin</u>

Ἑρμαῖος	674
Ἰάσιδας	179
Ἰησονίς	348
Κυλληναῖος	597

<u>Location</u>

αἰθέριος	390, 720
νότιος	692

<u>Color</u>

κυάνεος	398, 702

<u>Other</u>

ἀπευθής	270
διωκόμενος	384, 678

TABLE B

EPITHETS IN CPh

Brightness		Moral Quality		Physical Characteristics	
clarus	4, 66, 138 461, 471	amens ferus	421 140,	corniger fortis	XXVII 54
conlucens	208, 263, 322	formidans	413 158	leuipes mutus	121 55
feruidus	108, 377 462	funestis infestus	146 430	proiectus pulueru-	323 25
fulgens	84, 183, 219, 276, 368, 396, 412	lacrimosus sanctus summus	442 36 20, 294	lentus squamifer toruus umidus	328 VIII.2 327
inlustris	213	truculentus	XXV.2, 103		
lustrans	441				
micans	XVI.4	uaecors	424		
nitens	85, 102				
radians	172				
refulgens	108				
stellis distinctus	353				

Size		Ancestry or Origin		Location	
ingens	290	Cyllenius	381	locatus	207
magnus	XXII.3, 91 181, 263 469, 473	natus Ioue Neptunius	20 436		

Color		Other	
caeruleus	275	aestifer explorans	320 140

TABLE C

EPITHETS IN GPh

Brightness		Moral Quality		Physical Characteristics	
ardens	6, 509	bellans	556	acer	465
candens	416	defessus	608	auritus	341
candidus	465	fidens	694	corniger	536
clarus	194, 664, 670	flebilis	658	crinitus	87
		intactus	418	deformis	678
flammis cinctus	614	inuiolatus	104	gelidus	7, 289
		maestus	240	geminus	241, 379 567, 700
micans	231	nobilis	532		
nitens	278	pius	421, 547, 621, 639	infans	166
				laniger	565
				leuis	69
				pernix	610, 703
		placidus	104, 140	sinuosus	192
				squamigerus	390
		regalis	643	tortus	636
		sacer	71, 489, 706	rapidus	56
		trux	174		
		uenerandus	687		

Size		Ancestry or Origin		Location	
immanis	48	Cretaeus	24	aequoreus	371
magnus	1	Iasides	184	celsus	626
paruus	343, 691	Lycaonis	226		
uastus	609	Mercurialis	279		
		Minous	590, 692		
		Nemaeus	547		
		Nereius	356		
		Syrius	563		

Color		Other	
fuluus	149	aestifer	524
niueus	615	notus	692
		obscurus	688
		sonans	614
		tardus	139

TABLE D

EPITHETS IN AvPh

Brightness		Moral Quality		Physical Characteristics	
ardens	226	acer	1154, 1166	alatus	1246
clarus	205, 357			auritus	707
coruscans	460	famosus	581	celer	59, 508, 758
coruscus	1242	ferox	893		
flagrans	821, 1128	ferus	103	corniger	422, 662
flammifer	1046	formidatus	584	curuus	147, 250, 284, 421
flammiger	392	inculpatus	348		
ignicomans	1112	infortunatus	450	flexus	449, 1006
rutilans	1100	maerens	565, 958	gelidus	56
rutilus	526, 749, 801, 1083, 1316	maestus	1277	hirsutus	1244
		minax	1003	horrificus	825
spectabilis	859	miseratus	629, 791	lanatus	535
		sacer	101	leuis	1005
		trux	249	maculosus	193
				protentus	160
				pruinosus	169
				rigidus	1007
				saetosus	652, 823
				squammeus	140
				subiectus	276
				uillosus	1103

Size		Ancestry or Origin		Location	
breuis	981	Ariadnaeus	247	aerius	829
ingens	882, 895, 1170, 1303	Atticus	1046	celsus	1307
		Bambycius	542, 646	undicola	809
magnus	747	Cilix	1252		
paruulus	747	Cyllenaeus	1116		
		Iasides	441		
		Iasonius	756		
		Lycaonius	118, 1230		
		Mercurialis	1227		
		Minous	1080		
		Nereius	775		
		Phrixeus	1283		
		Thessalus	757, 982, 1133		
		Troicus	550		

EPITHETS IN <u>AvPh</u>

<u>Color</u>		<u>Other</u>	
caeruleus	981, 1031	imbrifer	779
canus	1118	omniparens	795
fuluus	1009	senex	795

TABLE E

EPITHETS IN ALPh

Brightness		Moral Quality		Physical Characteristics	
aeolus	275	laboriosus	577	cornu[31]	167
dilucidus	518	sacer	215	leuis	506
nitens	328			uolatilis	691
pallor [30]	369				
positus stellis	358				
stella posita	548				

Size		Ancestry or Origin		Location	
magnus	187, 354 402, 505, 636, 702	Mercurius	674	aetherius	390
				australis	692
paruus	268				

NOTES

[1] Compare the brief discussion of the choice of epithets in Latin astronomical works in A. Le Boeuffle, "Le vocabulaire latin de l'astronomie" (Doctoral thesis, University of Paris, 1970), III, 1067-1071. The author comments (p. 1071): "Ainsi l'ingéniosité des écrivains et l'expressivité de leur style se manifestent dans le choix d'épithètes riches de résonances multiples qui se prolongent de domaine en domaine".

[2] A. Cordier, Études sur le vocabulaire épique dans l'Énéide (Paris: Les Belles Lettres, 1939), pp. 222-223 states that Lucretius used compound adjectives with a frequency of 1.3% in the De Rerum Natura while Catullus used compound adjectives with a frequency of 4.6% in Carmen 64.

[3] Compound adjectives calculated according to the total number of verses for the Prognostica portions of the Latin poems show little agreement. In CPr, 11.1% of the lines contain compound adjectives; this figure is due to the fragmentary state of CPr itself. In GFr, 2.3% of the lines contain compound adjectives, and, in AvPr, 2.9% of the lines possess compound adjectives. Figures for GFr and AvPr are in general agreement with figures determined for GPh and AvPh.

[4] Compound adjective forms are used as substantives in Cicero's translation: Arquitenens (CPh 182, 405), Anguitenens (CPh 260, 293, 358, 454), Sagittipotens (CPh 73, 325, 459).

[5] Compound adjective forms are also used as substantives in Germanicus' translation: Aegoceros (GPh 286, 381, 484, 597), Arcitenens (GPh 566), Armiger (GPh 317), Biformis (GPh 699), Capricornus (GPh 7, 289, 321, 523, 567, 686), Hydrochoos (GPh 382, 693), Sagittifer (GPh 392), Sonipes (GPh 207, 618).

[6] Compound adjective forms are used as substantives in Avienus' translation for: Anguitenens (AvPh 227, 1218), Armiger (AvPh 694), Arquitenens (AvPh 684, 1048, 1144), Capricornus (AvPh 56, 649, 652, 662, 707, 823, 979, 1031, 1048, 1244, 1252, 1260), Corniger (AvPh 422, 662), Cornipes (AvPh 475, 485, 506, 645, 843, 883, 1266), Laniger (AvPh 515, 545, 773), Sagittifer (AvPh 672), Sagittiger (AvPh 842, 1226, 1245), Sonipes (AvPh 1121).

[7] The compound form honorifice (ALPh 152) is a mistranslation of the Greek word τῆμος (APh 152). It has not been included with other compound adjectives in ALPh.

[8] Compare the translation of the ordinary Greek adjective πολύς (APh 732) by the compound adjective multiformis (ALPh 732).

[9] Compound adjective forms can be found in use as substantives in the Aratus Latinus: Capricornus (ALPh 284, 286, 316, 386, 389, 400, 501, 547, 684, 689, 702).

[10]One example of a compound adjective form used as a substantive in CPr is Caprigenus (CPr VI). Compound adjectives in GFr are biformis (GFr IV.130), frugifer (GFr IV.38), letifer (GFr IV.40) and pestifer (GFr IV.90). Only belliger is found in both GPh and GFr. Compound adjective forms used as substantives in GFr are Aegoceros (GFr III.16, IV.69, IV.104, IV.158), Belliger (GFr·IV.32),·Capricornus (GFr 20, 38, 130), Hydrochoos (GFr IV.21), Sagittifer (GFr III.15, IV.157).

[11]There are no compound adjective forms used as substantives in AvPr.

[12]ALPr 966 contains the compound noun stillicidia which is a translation of the Greek word σταλαγμούς in APr 966.

[13]C.C. Coulter, "Compound Adjectives in Early Latin Poetry", TAPhA, 47 (1916), p. 158 notes that in compounds used from the earliest period of Latin literature to the time of Cicero, compound ending with -fer, -ger and -ficus were most common. J.C. Arens, "-Fer and -Ger: Their Extraordinary Preponderance Among Compounds in Roman Poetry", Mnemosyne, 4th series, 3 (1950), p. 243 states that in prose, cpmpounds in -fer are far less frequent than compounds in -φορος, while in poetry, compounds in -fer are much more numerous than compounds in -φορος. The statistical basis for this statement consists of the designation of compound adjectives used in various works by Greek and Latin authors.

[14]The word quadrupes may be found, for example, in Ennius, Annales 232 and quadruplex in Plautus, Curculio 619.

[15]J. Soubiran, ed., Cicéron: Aratea, Fragments Poétiques (Paris: Les Belles Lettres, 1972), p. 98 does not mention leuipes.

[16]Soubiran, Cicéron, p. 98.

[17]Armiger, for example, can be found in Plautus, Mercator 852; frugifer in Ennius, Annales 489; horrifer in Accius, Tragedies 571; sonipes in Accius, Tragedies 657. The words pestifer and signifer seem to have had their earliest use in the works of Cicero. Aliger is first evident in Aeneid 1.663; caelifer in Aeneid 6.796; letifer in Catullus, Carmen 64.394; belliger in Ovid, Ars Amatoria 2.672.

[18]The word astriger, for example, is found in Statius, Thebaid 8. 315; fluctiuagus in Statius, Siluae 3.1.84; ignipotens in Aeneid 12.90; imbrifer in Georgic 1.313; malesuadus in Plautus, Mostellaria 213; rauci-sonus in Lucretius, De Rerum Natura 5.1084; ueliuolus in Ennius, Annales 388.

[19]See J. Soubiran, ed., Aviénus: Les Phénomènes d'Aratos (Paris: Les Belles Lettres, 1981), p. 69, n. 5 and n. 6. Soubiran, however, does not mention ignicomans.

[20]For bipertitus compare Caesar, Bellum Gallicum 1.25 and Varro, Res Rusticae 1.5.4; for magnificus, see Plautus, Asinaria 351; for multi-

plex, see Plautus, _Epidicus_ 529; for _ueneficus_, see Terence, _Eunuchus_ 825; for _uniformis_, see Tacitus, _Dialogus de Oratoribus_ 32.

[21]Cordier, _Études_, p. 198 notes that epithets are an essential element of poetic language.

[22]The discrepancy in the total number of epithets found in _APh_ and _ALPh_, which is a word-for-word translation of the Greek poem, is due largely to mistranslations and missing portions of the Latin text.

[23]In order to agree more closely with the word εὐφεγγέος in _APh_ 518, the word _dilucida_ in _ALPh_ 518 should be masculine genitive in form (_dilucidi_). Because of its position in the line, however, _dilucida_ has been considered to be an epithet describing Orion.

[24]M. Parry, "The Meaning of the Epithet in Epic Poetry", in hiss _The Making of Homeric Verse_ (Oxford: Clarendon Press, 1971), p. 144 makes a distinction between fixed and particularized epithets. The fixed epithet (p. 165) is essentially traditional and ornamental, while the particularized epithet (p. 155) has a particular meaning and a particular application to an individual subject. The fixed epithet has no relevance outside the oral epic poetry of Homer and, therefore, epithets in other hexameter poetry can only be identified as particularized epithets (p. 166).

[25]For Cetus, compare W.T. Olcott, _Star Lore of All Ages: A Collection of Myths, Legends and Facts Concerning the Constellations of the Northern Hemisphere_ (New York: G.P. Putnam's Sons, 1911), p. 143.

[26]Compare _squammiferi Pisces_ in _CPh_ 328 and _squammeus draco_ in _AvPh_ 140. The monster was depicted as a whale. See Le Boeuffle, "Le vocabulaire latin", II, 473. Compare also R.H. Allen, _Star Names: Their Lore and Meaning_ (New York: Dover Publications, 1899, repr. 1963), p. 161.

[27]Allen, pp. 303-304. Orion has been admired in all ages as the most strikingly brilliant of the constellations. It is visible from all parts of the earth.

[28]For a discussion of these words as brightness words, see the following chapter.

[29]For the tale of Orion who struck fear into the Pleiades and their mother, see Soubiran, _Aviénus_, p. 118, n. 9. Compare scholia to Germanicus' translation found in A. Breysig, ed., _Germanici Caesaris Aratea cum Scholiis_ (Hildesheim: Georg Olms Verlagsbuchhandlung, 1867, repr. 1967), p. 149.

[30]The word _pallor_ (_ALPh_ 369) is included among epithets of brightness. Although it is a noun, it is a translation of the Greek epithet, γλαυκός (_APh_ 369).

[31]The noun _cornibus_ (_ALPh_ 167) has been included among epithets which designate physical characteristics since it is a translation of the Greek epithets κεραός and πεπτηώς (_APh_ 167)

VI.

SPECIAL ASTRONOMICAL VOCABULARY

Lexical variation from the Greek model is also evident among the translations in the area of special astronomical vocabulary, which encompasses, in this discussion, words of brightness used to describe constellations, color terms utilized for both constellations and astro-meteorological phenomena, and four words (uis, laetus, tristis and crinis) employed with the special meaning of brightness in the Latin poems. Because of the astronomical subject matter, these words are natural features of the poems, but because of the originality and flexibility with which the translators approached Aratus' Phaenomena, they serve, like compound adjectives and epithets, as places for creative expansion upon the original.[1]

1. Words of Brightness

Words of brightness are identified in this investigation as adjectives, nouns, verbs and adverbs which denote "brightness" or "light". Since the prose Aratus Latinus makes comparatively little use of brightness words,[2] and since they are more prominent in the first halves of the poems, which describe the constellations in the heavens, than in the second halves, which are concerned with the prediction of weather through various signs, our investigation of brightness words has been limited to the initial Phaenomena sections of the four poems. Figures presented below for the number of lines which contain one, two, three and four words of brightness demonstrate clearly the lexical variety evident in the Latin

translations in the use of words describing brightness.

TABLE I

	APh	CPh	GPh	AvPh
Total number of lines	730	542	724	1324
Lines with one brightness word	59	106	118	156
Frequency	8.1%	19.6%	16.3%	11.8%
Lines with two brightness words	1	34	23	69
Frequency	0.1%	6.3%	3.2%	5.2%
Lines with three brightness words	0	7	1	18
Frequency	0	1.3%	0.1%	1.4%
Lines with four brightness words	0	0	0	3
Frequency	0	0	0	0.2%
Total lines with brightness words	60	147	142	246
Frequency	8.2%	27.1%	19.6%	18.6%

The three translations and Aratus' poem agree only in their common emphasis on lines with one brightness word, and, in addition, APh, CPh and GPh share a common avoidance of lines with four words of brightness. The translations demonstrate their variation upon the Greek poem, however, by using words of brightness more frequently than their model. Individual variations are also evident. CPh has the highest frequency for lines with one and two words of brightness; GPh shows a comparatively low frequency for lines with two and three words of brightness and AvPh is the only one of the translations to possess lines with four brightness words.[3]

An approach independent of the Greek original and independent generally of the other translations is therefore displayed in each Latin poem.

Further evidence for the lexical variety present in the Latin translations can be obtained through the investigation of brightness words according to parts of speech, as the following table shows. A complete listing of the words by category may be found in the tables at the end of this chapter.

TABLE II

	APh	CPh	GPh	AvPh
Adjectives				
Number of different adjectives	20	6	6	13
Number of occurrences	34	39	29	71
Nouns				
Number of different nouns	6	9	9	13
Number of occurrences	10	85	52	163
Verbs				
Number of different verbs	7	18	15	27
Number of occurrences	17	70	86	125
Adverbs				
Number of different adverbs	0	1	0	1
Number of occurrences	0	1	0	1

Lexical variety is clearly seen in the figures from this table. APh emphasizes adjectives of brightness over nouns or verbs designating brightness, while the translations all demonstrate a general avoidance of such

adjectives. GPh, instead, emphasizes the use of verbs of brightness while both CPh and AvPh make greatest use of nouns representing brightness. AvPh, furthermore, exhibits the largest degree of variation in the use of different adjectives (13), different nouns (13) and different verbs of brightness and the largest numbers of occurrence for such adjectives (71), nouns (163) and verbs (125). GPh, in comparison with the other two translations shows less variety in the utilization of different adjectives, nouns, verbs and adverbs of brightness as well as less emphasis upon the total usage of adjectives, nouns and adverbs which signify brightness. These results suggest that although Germanicus altered slightly the innovative use of brightness words established by Cicero in his translation, Avienus followed Cicero's categorical emphasis and expanded the use of the brightness words in his own work.

Brightness words appear throughout the Latin translations,[4] and comparison of individual passages indicates that these words serve only two different functions in the Latin poems. First, words of brightness may be employed to expand the length and content of the Greek original in the Latin translations. The only example of this practice can be seen in Cicero's translation of APh 545-549, a discussion of the twelve signs of the zodiac. Aratus names the signs briefly and without reference to their brilliance:

> Τῶι ἔνι Καρκίνος ἐστί, Λέων ἐπὶ τῶι, καὶ ὑπ᾽ αὐτόν
> Παρθένος, αἱ δ᾽ἐπὶ οἱ Χηλαὶ καὶ Σκορπίος αὐτός,
> Τοξευτῆς τε καὶ Αἰγόκερως, ἐπὶ δ᾽ Αἰγοκερῆϊ
> Ὑδροχόος, δύο δ᾽ αὐτὸν ὑπ᾽ Ἰχθυες ἀστερόεντες,
> τοὺς δὲ μέτα Κριός, Ταῦρος δ᾽ ἐπὶ τῶι Δίδυμοί τε.

Cicero's translation of thie passage in CPh 320-331, by comparison, is three times as long as that of APh, and its expansion has been aided by

the use of twelve brightness words:

> Aestifer est pandens feruentia sidera Cancer;   320
> hunc subter fulgens cedit uis torua Leonis,
> quem rutilo sequitur conlucens corpore Virgo;
> exin proiectae claro cum lumine Chelae,
> ipsaque consequitur lucens uis magna Nepai;
> inde Sagittipotens dextra flexum tenet arcum;   325
> post hunc ore fero Capricornus uadere pergit;
> umidus inde loci conlucet Aquarius orbe[m];
> exim squamiferi serpentes ludere Pisces;
> quis comes est Aries, obscuro lumine labens,
> inflexoque genu, proiecto corpore, Taurus,   330
> et Gemini clarum iactantes lucibus ignem.

Cicero's translation of Aratus' lines contains many words of brightness, and since only clarus, conlucere and lumen are used more than once, variety in their employment is apparent. The technique of expanding this discussion of the zodiac by means of brightness words is unique to Cicero's translation. GPh 532-537, in comparison, uses mythical references to expand upon Aratus' list.[5] But Avienus (AvPh 1046-1051) follows Aratus' lines closely. Mythical references are absent and only one brightness word, flammifer (AvPh 1046), is present. The later translators, therefore, do not follow this innovative technique of their predecessor, Cicero. But their avoidance of Cicero's example not only highlights his innovative use of brightness words; it also reveals their own singular art of translation.

The Latin translators, secondly, employ words of brightness more commonly as embellishments or ornaments to reinforce their depiction of the brilliant night sky.[6] Cicero established this usage for words of brightness in his translation, and both Germanicus and Avienus, with some individual innovations, followed the technique. Ornamental brightness words are found in many passages from the Latin poems,[7] but the description of those constellations which rise and set with the sign of Cancer

indicates some notable similarities and differences in the use of such words. These four corresponding passages are approximately equal in length, and _APh_ 569-589 establishes the basic form of the discussion by mentioning the constellations Corona Borealis, Piscis Australis, Engonasin, Ophiuchus, Boötes, Orion and Eridanus:

> Οὔ οἱ ἀφαυρότατοι, ὅτε Καρκίνος ἀντέλλῃσιν,
> ἀστέρες ἀμφοτέρωθεν ἑλισσόμενοι περίκεινται,   570
> τοὶ μὲν δύνοντες, τοὶ δ’ ἐξ ἑτέρης ἀνιόντες.
> δύνει μὲν Στέφανος, δύνει δὲ κατὰ ῥάχιν Ἰχθῦς
> (ἥμισυ μέν κεν ἴδοιο μετήορον, ἥμισυ δ’ ἤδη
> ἐσχατιαὶ βάλλουσι κατερχομένου Στεφάνοιο).
> αὐτὰρ Γνὺξ ὄπιθεν τετραμμένος (ἀλλὰ μὲν οὔπω   575
> γαστέρι νειαίρῃ, τὰ δ’ ὑπέρτερα) νυκτὶ φορεῖται
> τὸν δὲ καὶ εἰς ὤμους κατάγει μογερὸν Ὀφιοῦχον
> Καρκίνος ἐκ γονάτων, κατάγει δ’ Ὄφιν αὐχένος ἐγγύς.
> οὐδ’ ἂν ἔτ’ Ἀρκτοφύλαξ εἴη πολὺς ἀμφοτέρωθεν,
> μείων ἡμάτιος, τὸ δ’ ἐπὶ πλέον ἔννυχος ἤδη·   580
> τέτρασι γὰρ μοίραις ἄμυδις κατιόντα Βοώτην
> ὠκεανὸς δέχεται· ὁ δ’, ἐπὴν φάεος κορέσηται,
> βουλυτῷ ἐπέχει πλεῖον δίχα νυκτὸς ἰούσης,
> ἦμος ὅτ’ ἠελίοιο κατερχομένοιο δύηται
> (κεῖναί οἱ καὶ νύκτες 'ἐπ’ ὀψὲ δύοντι' λέγονται).   585
> ὡς οἳ μὲν δύνουσιν, ὁ δ’ ἀντίος οὐδὲν ἀεικής,
> ἀλλ’ εὖ μὲν ζώνῃ εὖ δ’ ἀμφοτέροισι φαεινός
> ὤμοις, Ὠρίων, ξιφεός γε μὲν ἴφι πεποιθώς,
> πάντα φέρων Ποταμὸν κέραος παρατείνεται ἄλλου.

In this passage, only two words of brightness are present, the noun φάεος (582), used to describe Boötes as he sets having had his fill of "light", and the adjective φαεινός (587), which refers to Orion who is "shining", especially in the area of his belt and shoulders.

By comparison, _CPh_ 350-369 expands upon these two Greek words of brightness and makes use of nine brightness words in the same description of constellations rising and setting with Cancer:

> Nam simul ac primo supera se lumine Cancer   350
> extulit, extemplo cedit delapsa Corona
> et loca conuisit cauda tenus infera Piscis:
> dimidiam retinet stellis distincta Corona
> partem etiam supera, atque alia de parte repulsa est.

Quam tamen insequitur Piscis, nec totus ad umbras   355
iactus, sed supero contectus corpore cedit;
atque umeros usque a genibus clarumque recondit
Anguitenens ualidis magnum a ceruicibus Anguem.
Iam uero Arctophylax non aequa parte secatur:
nam breuior clara caeli de parte uidetur,   360
amplior infernas depulsus possidet umbras.
Quattuor hic obiens secum deducere signa
signifero solet ex orbi; tum serius ipse,
cum supera sese satiauit luce, recedit,
post mediam labens claro cum corpore noctem.   365
haec obscura tenens conuestit sidera tellus.
At parte ex alia claris cum lucibus enat
Orion, umeris et lato pectore fulgens,
et dextra retinens non cassum luminis ensem.

The word luce (364) translates φάεος (APh 582) and fulgens (368), φαεινός

(APh 587). But the other brightness words found in the passage, since

they have no equivalents in the corresponding passage from APh, can be

considered ornamental. The sign of Cancer, for example, is described

with the phrase primo lumine (350), the serpent with which Ophiuchus

wrestles, by means of the words clarum . . . Anguem (357-358) and

Boötes, with two separate references to its brightness, nam breuior clara

caeli de parte uidetur (360) and labens claro cum corpore (365). In

addition, Cicero employs other brightness words for Orion: claris, luci-

bus (367) and luminis (369). Cicero uses many more brightness words in

his discussion than Aratus, but since all words, except fulgens, are re-

peated, variety in the choice of different brightness words is not present.

Greater variety in the use of brightness words, however, can be

seen in Germanicus translation of the original passage (GPh 589-603).[8]

Only the word lumen is repeated:

Cum primum Cancrum Tethys emittit in auras,
excipit Oceanus Minoae serta Coronae,   590
occidit et dorso Piscis caudaque priore,
mergitur in totos umeros Ophiuchus et Anguis
ultima cauda micat, tortus hebet illa timendos.

> Nec multo Arctophylax his longe subiacet astris,
> lumine qui primo cum Scorpios occidit undis   595
> occulitur pedibus; durat tamen arduus ore,
> dum rigidum Aegoceri signum freta liuida terret.
> Siderea uix tum satiatus luce Bootes
> in terras abit et noctis plus parte relinquit.
> At contra nullo defectus lumine totus   600
> Orion umeris splendebit magnaque diui
> uagina et claro caelatus balteus igni.
> Cornua et Eridanus liquido feret utraque caelo.

Germanicus, like Cicero, translates the two words of brightness found in APh; luce (598) renders φάεος (APh 582) and splendebit (601), φαεινός (APh 587). The remaining six words of brightness, therefore, serve as embellishments. Micat (593) describes the serpent of Ophiuchus; lumine (595), the constellation Boötes, and lumine (600), claro and igni (602) are used in addition to the translated word splendebit to emphasize the brilliance of Orion. Finally, the word liquido (603) is used independently of the Greek original and Cicero's translation to portray the brightness of the sky itself in connection with the constellation, Eridanus.[9]

Further innovation and independence is present in Avienus' translation of Aratus' verses (AvPh 1077-1102). In this passage, the greatest degree of variety is present, for no word of brightness can be found more than once:

> Nam non obscurae, cum cancer commouet ortum,
> Oceano stellae circumuoluentur utroque,
> in freta labentes aut quae se rursus eoi
> parte ferunt mundi. Minoae clara coronae   1080
> serta cadent, austri tergo cadet incola piscis.
> hunc medium pendere tamen mediumque sub undas
> cedere per spinam rutila labente corona
> semper suspicies, at tergi plurima uersum
> uentre tenus summo supera inter sidera cernes: 1085
> os et colla dehinc et pectora uasta per aequor
> mersantur. premit ab genibus celsos ophiuchum
> usque umeros cancer, cancer premit ortus et anguem,

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      agmine qua uasto fluitat caput, asper ceruix
      qua tumet et spiris qua turgent pectora primis.        1090
      parte nec Arcturus distabit multus utraque,
      iam minor in superis, iam uiscera plurimus alto
      conditur.  hunc etenim consortem quattuor astris
      Oceanus recipit.  satur hic uix luminis omnis
      cedit et incipiens tandem conuexa relinquit.           1095
      tum iam plus mediis nox inclinabitur horis,
      cum labente die Phoebo comes ibit in undas.
      ista quidem uasti conduntur gurgitis alto,
      contra autem nullo reses ortum uiscere profert
      Orion, rutilans ardentia cingula late,                 1100
      et flagrans umeros et splendens ense corusco
      Eridanumque trahens alio se litore promit.
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Like his predecessors, Avienus translates the Greek words for brightness

used in Aratus' verses. Luminis (1094) is used for φάεος (APh 582) and

rutilans (1100) for φαεινός (APh 587). But Avienus emphasizes both the

brightness of Orion (which was also noted by the previous translators)

with the words ardentia (1100), flagrans, splendens and corusco (1101)

and the brilliance of the constellation Corona Borealis by using the

words clara (1080) and rutila (1083).

Words of brightness examined in context, therefore, demonstrate

more clearly the fondness for brightness words which was determined at

first from statistics compiled for the poems. Each of the translations

renders the two Greek words of brightness, φάεος and φαεινός, but in

each Latin poem the largest number of brightness words are additional

and without equivalent in APh. Innovation in the use of brightness words

is notable for each translation. CPh and GPh, but not AvPh, for example,

use words of brightness to describe the serpent of Ophiuchus, while both

GPh and AvPh use five brightness words to describe Orion and CPh employs

four. Each of the translators, furthermore, independently of the other

two, emphasizes one of the constellations by means of a word of bright-

ness; Cicero employs a brightness word in the description of Cancer,

Germanicus uses a brightness word in connection with Eridanus, and Avienus uses two brightness words for Corona Borealis. Although emphasis upon words of brightness in the Latin translations unites the three poems, lexical variety is possible and, it seems, appropriate for translations of the same Greek model.

2. Color Terms

Further lexical innovation is evident for color terms, words which are closely related to words of brightness. The concepts of color and brightness are intertwined in ancient sensibility, and, as a result, words from each of the two groups are often uncertain in meaning.[10] The Greek word, πολιός, for example, may be defined as "bright" or "gray" and the words γλαυκός and χαροπός may be defined as both "bright" and "light-blue or gray-eyed". In the previous section, however, they have been defined as words of brightness because of their context. Similarly, some words from the Latin translations may have meanings of both brightness and color; candidus may mean "white"; canere may refer to "gray"; rubere, rutilus, igneus and flammeus may mean "red",[11] while fulgere and fulgor may designate "yellow". But based on their meaning in context, each of these words has been included with words of brightness rather than with words of color.[12]

The number of true color terms in the Greek original and the Latin translations is smaller than the relatively large quantity of words designating brightness or light, but no less important in terms of the information which it conveys about lexical variations in the Latin poems. The following table provides a list of color terms for the first half of of each of the Latin translations and the Greek model.[13]

TABLE III

	APh	CPh	GPh	AvPh	ALPh
WHITE					
albus (-ere)	-	-	-	1	-
lacteus	-	2	1	-	-
niueus	-	-	2	-	-
BLACK					
ater	-	-	2	4	-
μέλας	1	-	-	-	-
niger	-	-	1	2	1
piceus	-	-	-	1	-
taeter	-	-	-	5	-
GRAY					
canus	-	1	-	7	-
RED					
cruentus	-	-	1	1	-
fucus	-	-	-	1	-
ostrum	-	-	-	1	-
πορφύρεος (-ειν)	2	-	-	-	-
purpureus	-	-	-	-	1
rubere	-	-	-	1	-
rutilus	-	-	-	1	-
YELLOW					
auratus	-	-	1	2	-
aureus	-	-	1	17	-
flauus	-	-	-	2	-
fuluus	-	-	1	2	-
luridus	-	-	-	1	-
pallor	-	-	-	-	1
BLUE					
caeruleus (caerulus)	-	4	3	16	-
coeaneus	-	-	-	1	-
cyaneus	-	-	-	1	-
κυάνεος	4	-	-	-	-
glaucus	-	-	-	1	-
liuidus	-	-	1	1	-
GREEN					
uiridis	-	1	-	1	-
TOTAL	7	8	14	70	3

The Latin verse translations share one chromatic feature with the Greek model, namely, a common emphasis upon color terms for blue. Most of the color terms for blue found in the Latin translations are used independently of terms for blue from APh, and the prominence of the color, therefore, cannot be due to translation of the Greek terms. Aratus employs the color term, κυάνεos, largely to describe the sea or things of the sea, and it is upon this use that the Latin poets expand. An important variation, however, is evident in AvPh where an even greater emphasis is given to color words denoting yellow.[14] The wide use of yellow, absent from the earlier translations, is indicative of the lexical variation present in the translations.

With twenty-two different color terms and a total of seventy occurrences, AvPh demonstrates, furthermore, the most variety in the use of such terms, while GPh with ten different color terms and a total of fourteen occurrences, and CPh with four different color terms and a total of eight occurrences show considerably less variation in use. ALPh, which employs only three different color terms (a total of three occurrences), in comparison, is least innovative in its approach to the words. Expressions of color increase in the Latin poems from CPh through AvPh and reflect the progressive enlargement of color sensitivity in the poems.[15] Such an increased sensitivity, however, is absent from ALPh since, as a word-for-word translation, it reflects, rather, the relatively low number of color terms found in APh.

The translation of Avienus also employs the largest number of different words to designate the same color. Four different words for black are present, as well as five different words for red, five different terms

for yellow and five different terms for blue. GPh demonstrates less variety in the number of different terms in use for the same color and uses two words each for white, black and blue and three words for yellow. CPh and ALPh, in contrast, display no such variations since only one word is employed to denote each particular color.

Words of color are employed in APh and the Latin translations to describe a number of different objects.

White

Lacteus is used for the Milky Way (CPh 249, CPh 286, GPh 458); niueus for Cygnus the Swan (GPh 615) and for Haemus the mountain (GPh 243), and albens for winter (AvPh 987).[16]

Black

The word ater is found in descriptions of night (GPh 291, GPh 695, AvPh 1061, AvPh 1263), Cetus (AvPh 1312) and stars (AvPh 639). Niger is used for the tail of Hydra (GPh 506), the underworld (AvPh 95, AvPh 210) and clouds (ALPh 563) where niger is a translation of the Greek μέλας (APh 563). The word piceus is found with night (AvPh 673) and taeter with Delphinus (AvPh 708), night (AvPh 452, AvPh 674), clouds (AvPh 587) and the atmosphere (AvPh 716).[17]

Gray

A color term for gray is found only in the translations of Cicero and Avienus. Canus describes the appearance of the sea (CPh 71, AvPh 308), the sky (AvPh 567), the bleakness of winter (AvPh 613, AvPh 987), the constellation Cygnus (AvPh 693, AvPh 1118) and the Milky Way (AvPh 993). This final color association suggests that Avienus used canus as a synonym for a color term meaning "white".

Red

Color terms for red are present in all the works except CPh. The Greek words πορφύρειν and πορφύρεος are used in connection with the sea (APh 158, APh 296).[18] Latin cruentus is found with reference to blood (GPh 130, AvPh 341) and rutilus and rubere also describe blood (AvPh 341, AvPh 597).[19] Ostrum (AvPh 345) and fucus (AvPh 346) both refer to the crimson color produced from dyes; purpureus (ALPh 158) describes the sea.

Yellow

Color terms for yellow are also absent from CPh.[20] The most commonly used color term, aureus, is found in descriptions of the moon (AvPh 514), the sun (AvPh 661, AvPh 1053), the stars (AvPh 279, AvPh 936), the constellation Boötes (AvPh 271), Sagittarius (AvPh 672), torches (AvPh 452, AvPh 474), fire (AvPh 1279), brightness (AvPh 572, AvPh 709)[21] and the apples of the Hesperides (AvPh 180). In additon, several metaphorical uses of the word aureus are present in the translations. Aurea saecula (GPh 103, AvPh 294, AvPh 327) denotes the "Golden Age"; omnia aurea terris (AvPh 316) refers to the "golden gifts" of Virgo to mankind, and pax aurea (AvPh 794) indicates the restoration of normality after the fatal ride of Phaëthon in his father's chariot.[22] The word fuluus, furthermore, is used for Leo (GPh 149), for Canis Major (AvPh 744) and for Aquila (AvPh 1009). Luridus is found with Cassiopeia (AvPh 454), and auratus with Aquarius (AvPh 1049), Orion (AvPh 723) and the Golden Fleece (GPh 532). Finally flauus describes wheat (AvPh 399) and fields (AvPh 615) while pallor describes Lepus the Hare (ALPh 369).

Blue

Color terms for blue, equally numerous, are present in all the works

except <u>ALPh</u>.[23] κυάνεος is used for the sea (<u>APh</u> 48), for Canis Major

(<u>APh</u> 329), for Cetus (<u>APh</u> 398) and for Capricorn, the bi-form Goat-fish

(<u>APh</u> 702). The word, κυάνεος, used in connection with the sea creatures,

Cetus and Capricorn, may be defined as "blue", but when employed for the

Dog, Canis Major, it may have, as in Homer, the meaning of "dark".[24] Cor-

respondingly, <u>cyaneus</u> (<u>AvPh</u> 402) may be defined as "blue" while <u>coeaneus</u>

(<u>AvPh</u> 732), a translation of κυάνεος (<u>APh</u> 329) can be defined as "dark".

The Latin word caeruleus (<u>caerulus</u>), often used as a translation for the

word κυάνεος, has as its primary meaning, "blue", especially the luminous,

deep blue of the sky at midday.[25] This adjective, however, is used most

frequently in the translations to describe the sea and things connected

with the sea: the sea itself (<u>GPh</u> 154, <u>GPh</u> 311, <u>GPh</u> 579, <u>AvPh</u> 61, <u>AvPh</u>

780, <u>AvPh</u> 807, <u>AvPh</u> 915, <u>AvPh</u> 1125, <u>AvPh</u> 1140, <u>AvPh</u> 1241, <u>AvPh</u> 1251),

Cetus (<u>CPh</u> 142, <u>CPh</u> 275, <u>CPh</u> 416, <u>AvPh</u> 981), Cancer (<u>AvPh</u> 1031) and one

of the two fish of the constellation Pisces (<u>AvPh</u> 560). But in a few

instances, <u>caeruleus</u> has no association with ths sea and, hence, little

connection with the meaning "blue". More specifically, <u>caeruleus</u> means

"blue-black"[26] in descriptions of clouds (<u>CPh</u> 204), Corvus the Crow (<u>AvPh</u>

900) and night (<u>AvPh</u> 609, <u>AvPh</u> 675). Furthermore, <u>caeruleus</u> used in the

phrases <u>caeruleas</u> . . . <u>puppes</u> (<u>AvPh</u> 420) and <u>caerulei</u> . . . <u>caloris</u>

(<u>AvPh</u> 397) seems to mean neither "blue" nor "blue-black". On analogy with

the Greek word κυάνεος, defined in some instances as "dark", and in view

of special cases where Latin <u>caeruleus</u> can mean "black" when associated

with the idea of death, we may translate <u>caerulea puppis</u> in the context

as "black ship", that is, a potentially death-bringing ship,[27] and <u>cae-</u>

<u>ruleus calor</u> as "black heat", the death-bringing heat of high summer which

appears at the summer solstice together with the Dog Star Sirius, itself commonly connected with the onslaught of disease.[28] Finally, two other color terms, less problematic than caeruleus, may be defined as "blue" because of their use in descriptions of the sea: liuidus (GPh 597, AvPh 1237) and glaucus (AvPh 307).[29]

Green

The color term uiridis is used with reference to grapes (CPh 423) and dolphins (AvPh 309). The identification of dolphins as uirides is intriguing, and two explanations for the use of the term may be offered; first, dolphins, although not green in color themselves, may appear so because of the reflection of the sea, or second, uiridis, an epithet of the sea,[30] has been transferred to the dolphin so that the phrase delphini uirides may be translated as "dolphins of the green sea".[31]

The innovative and varied use of color terms in the Latin verse translations is further evident in the general absence of the technique of translating the Greek color terms found in APh into Latin. Only one color term in Latin, coeaneus (AvPh 732) serves as a translation of a Greek equivalent, κυάνεος (APh 329). The prose Aratus Latinus also translates Greek color terms infrequently; purpureus (ALPh 158) translates the word πορφύρεος (APh 158) and niger (ALPh 563) renders μέλας (APh 563). ALPh, however, never renders exactly the Greek color term κυάνεος, and in ALPh 702 magnus is substituted as a translation for the same word found in the corresponding line (APh 702). The remaining Latin color terms which were described above are without any equivalents in the original APh. In the case of CPh, GPh and ALPh, these additional color words seem to mirror the use of blue in APh, but an expanded color sensibility, em-

phasizing both blue and yellow, distinguishes AvPh from the other trans-
lations of the Greek poem.

The Prognostica segments of the original Greek poem and the Latin
translations, on the other hand, demonstrate a very different approach to
the use of color, as the table on the following page indicates. Considera-
ble variety between the two halves of the poems is evident from the re-
sults in this table when they are compared with those presented in Table
III. First, the color gray is absent from the Prognostica portions of
the poems, and, instead, the color brown has been added to the chromatic
scheme. APr, in addition, contains twice as many different color terms
as APh and more than three times as many occurrences of color terms. Sim-
ilarly, ALPr uses a total of eighteen color terms while ALPh employs only
three. In contrast, CPr, GFr and AvPr employ fewer words for color
than CPh, GPh and AvPh. The large variety of color terms used in the
Phaenomena sections to designate a single color is also lacking in the
Prognostica sections of the Latin works. In AvPr, for example, three dif-
ferent color terms for black, four different terms for red, and two each
for yellow and for blue are present. Greater variety, as noted above, is
evident in AvPh. Finally, the general color emphasis of the Prognostica
portions differs from that found in the Phaenomena portions. In APr,
the most prominent colors are black and red, and, in ALPr, the most numer-
ous color terms are those used to denote black. Similarly, color terms
for black are most prominent in AvPr.[32] This emphasis on black and red
contrasts notably with the emphasis on less somber colors in the first
halves of the poems, blue in APh, CPh and GPh, and blue together with yel-
low in AvPh. This darker tone in the Prognostica segments is due large-

TABLE IV

	APr	CPr	GFr	AvPr	ALPr
WHITE					
albus (-ere)	-	-	-	2	1
canus	-	2	-	-	-
dealbescere	-	-	-	-	1
λευκός	2	-	-	-	-
niueus	-	1	-	-	-
ὑπολευκαίνεσθαι	1	-	-	-	-
BLACK					
ater	-	-	2	8	-
μέλας (-άνειν, -αίνειν)	11	-	-	-	-
niger (-grescere)	-	-	-	-	8
piceus	-	-	-	3	-
taeter	-	-	-	6	-
RED					
ἔρευθος ἐρυθαίνειν ἐρευθεῖν	8	-	-	-	-
purpureus	-	-	1	-	-
rubescere	-	-	-	4	-
rubidus	-	-	-	-	1
rubigo	-	-	-	-	1
rubor	-	-	-	1	-
rutilus (-are)	-	-	-	1	2
sanguineus	-	-	-	2	-
φοινίσσειν	2	-	-	-	-
YELLOW					
auratus	-	-	1	-	-
aureus	-	-	1	1	-
fuluidus	-	-	-	-	1
ξουθός	1	-	-	-	-
pallidus (-ere)	-	-	-	2	3
BROWN					
fuscus	-	1	-	-	-
BLUE					
caeruleus	-	-	1	2	-
liuere	-	-	-	1	-
GREEN					
uiridis	-	1	-	-	-
TOTAL	25	5	6	33	18

ly to its different subject matter of storms and weather portents. And certainly, the Phaenomena portions have a natural advantage in expressing brightness and color because of the presence of the constellations. But the consistent emphasis upon different colors in the two halves of the poems suggests that the translators exploited them for variety in order to distinguish further the two portions of the poems.

Words expressing color are employed in APr, CPr and AvPr, as in the previously discussed APh, CPh and AvPh, to describe a number of different objects.

White

The Greek word λευκός is used with reference to flowers (APr 921, APr 1063) and ὑπολευκαίνεσθαι is found in the description of shooting stars (APr 927). The translation of this line (ALPr 927) employs the word dealbescere. Canus is used for rocks (CPr III.3) and for birds (CPr III.7), niueus for the sea (CPr III.3), albere for snow (AvPr 1775) and albus for the appearance of a star (AvPh 1698).

Black

Words for black are the most numerous color words in the Prognostica portions of the poems. The adjective μέλας is used to describe the earth (APr 959), night (APr 926) and mastich trees (APr 1044), while the verb μελαίνειν is found with Praesepē (APr 903) and with the description of the halo of a star (APr 941). Μελάνειν describes the sun (APr 836), clouds (APr 854), the moon (APr 804), the halo of the sun (APr 877, APr 878) and the halo of the moon (APr 817). The Latin adjective niger is used for the earth (ALPr 959), lamplight (ALPr 1034), the halo of a star (ALPr 941), the sun (ALPr 836), clouds (ALPr 854) and night (ALPr 926). The related

verb, nigrescere, is found in descriptions of the halo of the sun (ALPr 877) and the halo of the moon (ALPr 817). Ater is employed to describe a storm (AvPr 1625, AvPr 1628, AvPr 1846), the sun (AvPr 1548, AvPr 1593, AvPr 1640), clouds (AvPr 1798) and the holm oak (AvPr 1851). Piceus describes the sun (AvPr 1578) and clouds (AvPr 1549, AvPr 1618), while taeter is used for the sun (AvPr 1579, AvPr 1644, AvPr 1662), for clouds (AvPr 1773), for the moon (AvPr 1540) and for the blackness around a star before a storm (AvPr 1699).

Red

Like the color black, red is used to describe the sun, the moon and clouds. Aratus uses ἔρευθος for the moon (APr 784), the sun (APr 834, APr 837) and clouds (APr 860), as well as ἐρευθεῖν for the sun's parhelia (APr 882), the moon (APr 797, APr 803), ἐρυθαίνειν for the sun (APr 835)[33] and φοινίσσειν for descriptions of the sun's parhelia (APr 887) and the moon (APr 798).[34] Similarly, the Latin adjective sanguineus is used for the parhelia of the sun (AvPr 1576) and for clouds (AvPr 1635); rutilus (AvPr 1485) and rutilans (ALPr 798) are used for the moon, rutilus (ALPr 827) for the sun, rubigo (ALPr 849) for the sun and rubidus (ALPr 927) for shooting stars. Rubor (AvPr 1457) describes the moon and rubescere describes the moon (AvPr 1488), the sun (AvPr 1577), it's parhelia (AvPr 1645) and comets (AvPr 1819).

Yellow

Color terms for yellow are more infrequent. Ξουθός (APr 1028) and fuluidus (ALPr 1029) describe bees; pallidus describes the moon (ALPr 797, ALPr 786) and the sun (AvPr 1611, ALPr 851), while pallere describes the sun (AvPr 1613) and aureus, also the sun (AvPr 1357).

Brown

Only one instance of fuscus, "brown", can be found in the works. Cicero

uses the word to describe a crow (<u>CPr</u> IV.8).[35]

Blue

Color terms for blue are used in the Latin translations only by <u>AvPr</u>.
<u>Liuere</u> is used for clouds (<u>AvPr</u> 1593), and <u>caeruleus</u> for both the sea
(<u>AvPr</u> 1673) and Sirius (<u>AvPr</u> 1376). The meaning of <u>caeruleus</u> in <u>AvPr</u>
1376 (<u>caeruleo Sirius astro</u>) is problematic. In this context, the word
may mean "blue" since Sirius is a blue star,[36] but again on analogy with
the use of <u>caeruleus</u> in the phrase <u>caerulei caloris</u> (<u>AvPh</u> 397), which
was discussed earlier, we may define <u>caeruleus</u> as "black" because of the
traditional association of Sirius with death and disease.

Green

One usage of <u>uiridis</u> is present in Cicero's description of the mastich
tree (<u>CPr</u> V.1).

A large number of these color terms from the Latin <u>Prognostica</u>
sections of the works are translations of Greek color terms found in cor-
responding lines, and this feature contrasts strikingly with the general
absence of translated color terms in <u>CPh</u>, <u>GPh</u>, <u>AvPh</u> and <u>ALPh</u>. Thirteen
of the total number of thirty-three color terms found in <u>AvPr</u>, for instance,
are translations of corresponding color terms from <u>APr</u>, and twelve of the
eighteen color terms from <u>ALPr</u> are also translations of corresponding terms
from the Greek poem:

<u>APr</u> 784:	ἐρευθής	<u>AvPr</u> 1457:	<u>rubore</u>
<u>APr</u> 797:	ἐρευθόμενος	<u>AvPr</u> 1485:	<u>rutilo</u>
<u>APr</u> 798:	φοινίσσοιτο	<u>AvPr</u> 1488:	<u>rubescat</u>
<u>APr</u> 817:	μελανεῦσα	<u>AvPr</u> 1540:	<u>taeter</u>

APr 834:	ἔρευθος	AvPr 1576:	sanguineus . . . rubor
APr 835:	ἐρυθαίνεται	AvPr 1577:	rubescunt
APr 836:	μελανεῖ	AvPr 1579:	taetro
APr 854:	μελαίνεται	AvPr 1618:	piceo
APr 877:	μελανεῦσαι	AvPr 1640:	ater
APr 878:	μελανεῦσαι	AvPr 1644:	taetrae
APr 882:	ἐρεῦθεται	AvPr 1645:	rubescit
APr 903:	μελαίνεται	AvPr 1662:	taetra
APr 941:	μελαινομένην	AvPr 1699:	taeter
APr 797:	ἐρευθόμενος	ALPr 797:	pallidiorem
APr 798:	φοινίσσοιτο	ALPr 798:	rutilans
APr 817:	μελαίνεται	ALPr 817:	nigrescere
APr 836:	μελανεῖ	ALPr 836:	nigrae
APr 854:	μελαίνεται	ALPr 854:	nigro
APr 877:	μελανεῦσαι	ALPr 877:	nigrescit
APr 921:	λευκῆς	ALPr 921:	candore
APr 926:	μέλαιναν	ALPr 926:	nigrae
APr 927:	ὑπολευκαίνονται	ALPr 927:	dealbescunt
APr 941:	μελαινομένην	ALPr 941:	nigerrimam
APr 959:	μελαίνης	ALPr 959:	nigerrima
APr 1063:	λευκῶι	ALPr 1063:	albos

In contrast with APh where six of the seven color terms were forms of
κυάνεος and πορφύρεος, words which were puzzling and difficult to trans-
late into Latin, APr contains color terms for black and red which were
among the most common color terms found in the Greek language.[37] For

this reason, their meaning would have been clearer to the Roman transla-

tors, and hence they would have been rendered more easily in the Latin

works. The Prognostica portions did not allow much diversity of color use.

The necessity of describing weather conditions and the appearance of the

sun, moon and clouds in the sky made it inevitable that the translation of

color terms, especially those for red and black, would occur frequently,

and that less flexibility in the handling of such terms would be evident.

3. Selected Words

Lexical variety and originality are also revealed in the Latin verse

translations in the use of several words (uis, laetus, tristis and crinis)

with meanings particular to the works. As a group, these words are united

because of their connection with the element of brightness which, as we

noted earlier, plays an important role in the creative expansion by the

poets upon the Greek original.

Vis

Although uis is an important word in the Latin translations of Ara-

tus' Phaenomena, it has received little attention in commentaries to the

works.[38] In the Latin poems, uis is used with three different meanings,

the first of which, "force or power", is found in CPh 206:

a[t] signorum obitu uis est metuenda Fauoni.

In this line, uis refers to the power of the West Wind.[39] A comparable

employment of uis in this sense may be found in AvPr 1810-1811:

> . . . ueniet uis aethere toto
> dira procellarum nix omnis uestiet agros,

Here, uis expresses the violence of winter storms.[40]

A more specialized use of uis as "power" is found in the fragments

of Germanicus' translation. In the three examples present in GFr, uis is

always used in its plural form in the sense of astrological power or influ-

ence.[41] Germanicus, for example, makes a general statement on the astro-

logical influence and power of the planets over mortals (GFr III.23-24):

> Haec ut quisque deus possedit numine signa
> adiungunt proprias uires . . .

Quisque deus denotes the individual gods who were associated with the plan-

ets. The power of a particular god (and planet), Mars, is also signalled

(GFr IV.36):

> effundet totas uiolento numine uires .

Violento numine stresses the harsh character of the god whose power is iden-

tified by the word uires.[42]

A more unusual usage of the word uis, however, is found in the poems

of Cicero and Avienus. As the following instances indicate, the majority

of examples are present in CPh:

> CPh 57: Serius haec obitus terrai uissit Equi uis,
>
> CPh 321: hunc subter fulgens cedit uis torua Leonis,
>
> CPh 324: ipsaque consequitur lucens uis magna Nepai;
>
> CPh 370: Sed cum de terris uis est patefacta Leonis,
>
> CPh 372: cedunt obscurata; simul uis magna Aquilai
>
> CPh 418: cum uero uis est uehemens exorta Nepai,

In each instance, uis is found in the nominative singular together with

the genitive singular form of the name of a constellation. And each word

has no equivalent in the corresponding lines from APh. A problem arises

when attempts are made to define uis in these contexts as "force or vio-

lence" or "astrological influence" since translations such as "the violence

or force of Pegasus" or the "astrological influence of Leo" are not appropriate in the statements.[43] Another meaning for <u>uis</u>, "energy", is possible, but it is a weak choice in comparison with what seems to be the real meaning of the word, as determined from the lines themselves.

We may note, for example, that the participles <u>fulgens</u> (<u>CPh</u> 321) and <u>lucens</u> (<u>CPh</u> 324) modify the word <u>uis</u>. Each of these two words, identified above as brightness words, suggests that <u>uis</u> itself in certain contexts can be defined as a kind of brightness word.[44] <u>Vis Nepai</u> (<u>CPh</u> 418) may therefore be translated as the "brightness of Scorpio" and <u>uis Leonis</u> (<u>CPh</u> 321) as the "brightness of Leo". The adjectives <u>uehemens</u> (<u>CPh</u> 418) and <u>torua</u> (<u>CPh</u> 321) may be then taken as epithets transferred from <u>uis</u> to the constellations themselves. This definition of <u>uis</u> as "brightness" is supported by the large and significant use of brightness words in Cicero's translation. And further support for this meaning can be found in the translation of Avienus. A reference to the brightness of a comet appears in <u>AvPr</u> 1591-1592:

> . . . hicque comarum
> <u>uis</u> confusa micans mundo sua lumina praestat,

The participle <u>micans</u>, a word of brightness, modifies the word <u>uis</u> and is found together with another word of brightness, <u>lumina</u>, in the lines.[45] The word <u>uis</u> is also used in connection with the sun (<u>AvPh</u> 1557-1558):

> at cum flammigeri cedit <u>uis</u> inclita solis,
> lucis egens . . .

Our definition of "brightness" for <u>uis</u> in this context is augmented by the inclusion of the brightness words <u>flammiger</u> and <u>lucis</u> in the description.[46]

The word <u>uis</u> may be defined as brightness in one final example from the discussion of the constellations found on the Tropic of Capricorn

(CPh 270-271):

. . . tris esse relictas,
tempore nocturno quas uis inferna frequentat,

Cicero's reference to uis inferna has no equivalent in APh, but the defi-
nition of uis as "brightness" allows the translation, "that three are left
which the infernal brightness assembles together in night". The phrase
uis inferna may be considered simply as a periphrasis for inferi which can-
not be used in the hexameter, but in view of the innovative usage of uis
in the translations, the phrase may also be considered as oxymoronic or
highly poetic, since "infernal brightness" is, in less exalted form, shad-
ows or darkness.[47]

Laetus

Like uis, laetus also has a special meaning which is applicable to
the translations of Aratus' Phaenomena. Most instances of the word have
the usual meaning of "joyful" and are used independently of any corres-
ponding words from APh.[48] In GPh 107-108, for example, laetus is found
in a description of the activity of Virgo during the Golden Age:

. . . mediis te laeta ferebas
sublimis populis nec dedignata subire
tecta hominum . . .

Laeta in these lines describes Virgo's joy in dealing closely with the men
who lived in the Golden Age. Germanicus also mentions the happiness of
the farmer who rejoices in crops which have grown luxuriant by the time
the sun has entered the sign of Cancer (GPh 153):

et densas laetus segetes bene condet arator.

And he describes the emotions of Andromeda (GPh 704-705):

Pisces educunt Cepheida; laetior illa
Nereidas pontumque fugit caeloque refertur.

She rejoices in her escape from the Nereids who had so harshly punished her mother Cassiopeia.[49] Another example of this usual meaning of the word laetus is present in AvPh 1744-1745:

> . . . tum nota cubilia laeti
> succedunt pariter, tum pinnis corpora plaudunt;

Even crows are happy (laeti) to reach their familiar nests.

In other instances, however, the word laetus may be defined as "bright".[50] Cicero uses the word to describe the sun (CPh 98):

> atque inter spatium et laeti uestigia solis.

In this line, laeti solis denotes the "bright sun", not the "joyful sun", although the connection between joyful and bright in this context is more acceptable since the sun, if depicted in human terms, could be viewed as rejoicing in the spectacular brightness which is at once its existence and its glory.[51] Cicero's translation contains another example of this word which can be defined as "bright" (CPh 458):

> et dextra[e] radios laeto cum lumine iactans.

In this description of the rising of Engonasin with Scorpio, the sense of brightness conveyed by laeto is further strengthened by the presence of two other words of brightness (radios and lumine). Finally, laetus is used by Germanicus to describe the bright wings of Cygnus (GPh 281-283):[52]

> . . . Penna utraque laeta,
> dexterior iuxta regalem Cepheos ulnam,
> at laeua fugit instantem sibi Pegason ala.

The word laeta has no equivalent in the corresponding line from APh, and again it may imply both stellar brightness and the joyous flight of a living bird soaring through the sky.[53]

Tristis

Instances of tristis, "sorrowful", in the translations are addi-

tional and without equivalents in the original Greek poem. This common

meaning for the word in Latin is expressed, for example, in GPh 122-123:

> seraque ab excelsis descendens montibus ore
> uelato tristique genas abscondita uitta,

Virgo, her veiled face described as tristis, is sorrowful because she has

witnessed the decline of the human race.[54] An extension of the meaning

"sorrowful" to "sorrow-bringing" may be found in AvPh 860-861:

> feta pruinarum se uellera, qualia tristi
> coguntur uento terraque excita per aethram.

A "sorrow-bringing wind" naturally accompanies the constellation Ara,

which itself brings bad weather and calamities to mankind.[55] But a fur-

ther expansion of the application of laetus in other descriptions produces

another meaning, "dark".[56] Avienus, for example, describes the figure of

Electra, one of the seven Pleiades (AvPh 594-595):

> . . . diros hos fama cometas
> conmemorat tristi procul istac surgere forma.

According to Avienus, Electra appears sad either because of her fear of

the hunter Orion or because of her distress at seeing the city of Troy

destroyed. But she is also "dark" since she hides herself from view and

thus forces the observer to try to reconcile the seven sisters of legend

with the six stars in the cluster which are visible in the night sky.[57]

This meaning of "dark" is prominent in Germanicus' translation (GPh 93-94):

> Non illi obscurum caput est, non tristia membra,
> sed proprio tamen una micat sub nomine flamma,

It is also found in GPh 210-211:

> . . . Capiti tristissima forma,
> et ceruix sine honore obscuro lumine sordet.

and in GPh 697:

> non uastos umeros, non pectora tristia saetis.

In two instances (GPh 93, GPh 210), Germanicus uses the word tristis to-
gether with another word meaning "dark", obscurus, to describe constella-
tions. In the final example, (GPh 697), tristis is used to denote the
appearance of the constellation Centaur. Although unaccompanied by another
word designating darkness, tristis in the phrase pectora tristia saetis
must mean "a chest dark with thick hair" since a meaning of "sorrowful" in
this context makes little sense.[58]

Crinis

Lexical innovation is also evident in the Latin translations in
the use of the word crinis which, like tristis and laetus, has basically
two different meanings in the poems. The more usual definition of "hair
or things analogous to hair" is applied to the descriptions of animals,
plants and human beings. In Avienus' translation, this use of crinis is
always without precedent in the original Greek poem. Crinis is found in
the description of the mane of Pegasus (AvPh 470):

>   Rursus odorato qua uertex crine tumescit,

for stalks of wheat (AvPh 398-399):[59]

>   tum succisa Ceres statim cum mergite culmi
>   construitur, flauos tondentur semina crines

and for the hair of Electra (AvPh 593-594):

>   diffusamque comas cerni crinisque soluti
>   monstrari effigiem . . .

In this description, Avienus emphasizes the disheveled appearance of the
mourning Electra.

Crinis, however, often has the additional meaning of "brightness"
as the following example which depicts the comets connected with Electra
indicates (AvPh 594-597):

> . . . diros hos fama cometas
> conmemorat tristi procul istac surgere forma,
> uultum ardere diu, perfundere crinibus aethram,
> sanguine suppingi rutiloque rubere cruore.

Crinibus in these lines describes both the wispy and bright appearance of

the foreboding comets.[60] Found in the company of the brightness word, ar-

dere, and the words, rutilo and rubere, which have been identified in this

special case as color terms, crines here conveys both the image of hair

and that of colorful brilliance. Two other references to the streaming

tails of comets are present in AvPh 1818-1819:

> ignescunt flammis mundique inpulsa calore
> excutiunt stellas et crebro crine rubescunt.

and in AvPh 1688-1689:

> . . . rutilarum spargere crines
> flammarum et longos a tergo ducere tractus:[61]

These descriptions are very similar since they share a common use of addi-

tional brightness words: ignescunt, flammis, rubescunt (1818-1819) and

rutilarum, flammarum (1688-1689).

An extension of this meaning of crinis, "brightness", used in con-

nection with comets, moreover, seems peculiar only to these translations

of Aratus' poems. In one example, Germanicus depicts the constellation

Boötes as it rises from the ocean (GPh 624-625):

> exilit Oceano tum toto crine Bootes,
> quem claro ueniens Arcturus nuntiat ore.

This use of crinis is without precedent in APh, and in these lines the

word clearly cannot refer to the "tail" of the constellation, since con-

stellations or ordinary stars do not have such exaggerated streams of

light.[62] The use of claro ore (GPh 625) provides a clue that crinis in

the lines has a strong connection with the idea of brightness; it also

indicates that the translators have used _crinis_ in a novel way in trans-
ferring the word _crinis_, "brightness", from comets to stars. Other in-
stances of this innovative use of _crinis_ are present in the translations.[63]
Avienus, using _crinis_ with additional words of brightness (_micat_, _ignis_,
rutilo, _flagrat_ and _flammea_) presents a general picture of the stars in
the heavens (_AvPh_ 80-81):

> . . . micat omnibus ignis
> et rutilo cunctis flagrat coma flammea _crine_.[64]

Another individual constellation, Scorpio, is described with the word
crinis and the accompanying brightness words, _ignis_ and _incendia_   (_AvPh_
252-253):

> . . . namque hebes ollis
> ignis et optunso marcent incendia _crine_.[65]

Finally, Avienus depicts the brightness of the sun (_AvPr_ 1626-1628):

> . . . Sed cum radiis marcentibus ardor
> languet et in tenui tenduntur acumine frustra
> Phoebei _crines_, nimbos aget atra procella,

The word _crines_, supported by two other brightness words, _radiis_ and _ardor_,
refers figuratively to the "hair of Phoebus", which is actually the bright
appearance of the sun. This use of _crinis_ in connection with the sun cap-
tures most nearly the original association of the word with the fiery tails
of comets, because, of all the stars, only the sun appears to emit its light
in visible rays.[66]

Statistics and stylistic analysis, in conclusion, reveal the lexi-
cal originality and flexibility of the Latin translations of Aratus' poem.
In the _Phaenomena_ portions of the poems, the majority of brightness words
are independent of any corresponding words in the Greek poem, and individ-

ual innovations within the translations themselves serve to make them distinct from one another. Similarly, color terms from the Greek _Phaenomena_ section are rarely translated in the Latin works, and a variety of color terms are applied to a large number of different objects. But for the _Prognostica_ halves of the Latin translations, the opposite result has been obtained, for we find less variety in objects described in chromatic terms, more translation of Greek color terms and a different color emphasis on red and black. Finally, the presence of lexical variety in the translations is further substantiated by our study of four words in the Latin poems which are connected with the special astronomical meaning of "brightness". Vocabulary particular to the astronomical content of the works, therefore, exhibits features which distinguish the Latin translations as a group from the original Greek poem, but which does not obscure their particular individual features.

TABLE A

OCCURRENCES OF BRIGHTNESS WORDS IN APh, CPh, GPh and AvPh[67]

ADJECTIVES

APh		CPh		GPh		AvPh	
ἀγαυός	3	clarus	24	candidus	3	clarus	15
ἀγλαός	3	feruidus	5	clarus	14	coruscus	5
αἰγλήεις	1	ignifer	1	igneus	3	flammeus	1
αἶθοψ	1	illustris	3	liquidus	5	flammifer	2
αἰόλος	1	praeclarus	3	lucidus	3	flammiger	8
ἀρίδηλος	1	rutilus	3	speciosus	1	igneus	6
ἀστέριος	1					ignicomans	1
ἀστερόεις	2					ignifer	1
γλαυκός	1					ignipotens	1
ἐπόψιος	2					lucidus	1
εὐφεγγής	1					luciparens	1
καθαρός	6					rutilus	26
οὐράνιος	1					spectabilis	3
περιγληνής	1						
ποικίλος	1						
πολιός	1						
πολυσκέπτος	1						
πολυτειρής	2						
φαεινός	2						
χαροπός	2						
TOTAL	34		39		29		71

TABLE B

OCCURRENCES OF BRIGHTNESS WORDS IN <u>APh</u>, <u>CPh</u>, <u>GPh</u> and <u>AvPh</u>

<u>NOUNS</u>

<u>APh</u>		<u>CPh</u>		<u>GPh</u>[69]		<u>AvPh</u>	
τὸ ἄγαλμα	1	ardor	1	ardor	2	acies[71]	2
ἡ αἴγλη	3	candor	3	flamma	14	ardor	4
ἡ ἀμαρυγή	2	flamma	2	fulgor	1	fax	22
ἡ αὐγή	1	fulgor	3	ignis	14	flamma	29
τὸ γλῆνος	1	ignis	3	lumen	11	fulgor	5
τὸ φάος	2	lumen[68]	51	lux	7	ignis	29
		lux	16	nitor	1	incendium	9
		nitor	3	radius[70]	1	iubar	2
		radius	3	splendor	1	lampas	1
						lumen	20
						lux	31
						radius	2
						rubor	7
TOTAL	10		85		52		163

TABLE C

OCCURRENCES OF BRIGHTNESS WORDS IN <u>APh</u>, <u>CPh</u>, <u>GPh</u> and <u>AvPh</u>

<u>VERBS</u>

<u>APh</u>		<u>CPh</u>		<u>GPh</u>		<u>AvPh</u>	
αἴθεσθαι	4	ardere	6	ardere	9	accendere[72]	1
ἀστράπτειν	1	candere	2	candere	4	adolere	5
ἐπιλάμπειν	2	clarare	4	effulgere	1	ardere	16
λάμπειν	1	conlucere	5	emicare	1	candere	1
περιφαίνεσθαι	1	coruscare	1	flagrare	1	circum-flagrare	1
σειριᾶν	1	feruere	1	fulgere	18	coruscare	7
φαείνειν	7	flagrare	1	inter-lucere	1	emicare	2
		fulgere	13	lucere	17	feruere	3
		lucere	5	micare	13	flagrare	17
		lustrare	8	nitere	6	flammare	5
		micare	4	radiare	8	fulgere	2
		nitere	6	refulgere	3	inlustrare	3
		nitescere	1	relucere	1	lucere	1
		radiare	4	splendere	2	lustrare	1
		refulgere	4	stellare	1	micare	14
		relucere	3			nitere	3
		splendere	1			nitescere	1
		sublucere	1			radiare	1
						refulgere	1
						resplendere	1
						rubere	5
						rubescere	1
						rutilare	16
						splendere	1
						splendescere	1
						succendere	3
						uibrare	12
<u>TOTAL</u>	17		70		86		125

TABLE D

OCCURRENCES OF BRIGHTNESS WORDS IN <u>APh</u>, <u>CPh</u>, <u>GPh</u> and <u>AvPh</u>

<u>ADVERBS</u>

<u>APh</u>		<u>CPh</u>		<u>GPh</u>	<u>AvPh</u>	
		clare	1		clare	1
<u>TOTAL</u>	0		1	0		1

TABLE E

OCCURRENCES OF BRIGHTNESS WORDS IN <u>ALPh</u>

<u>ADJECTIVES</u>

aeolus	1
candidus	1
clarus	1
dilucidus	4
gloriosus	1
praeclarus	1
purus	1
splendidus	2
<u>TOTAL</u>	12

<u>NOUNS</u>

lumen	1
nitor	1
radium	1
splendor	4
<u>TOTAL</u>	7

<u>VERBS</u>

fulgere	3
lucere	2
nitere	1
purificare	1
superemicare	1
superlucere	1
<u>TOTAL</u>	9

NOTES

[1] Compare the brief discussion of designations of brightness and color in Latin astronomical works in A. Le Boeuffle, "Le vocabulaire latin de l'astronomie" (Doctoral thesis, University of Paris, 1970), III, 1060-1061.

[2] ALPh provides only twenty-eight examples of brightness words. They can be found in the tables at the end of this chapter.

[3] Lines with four words of brightness in AvPh are AvPh 196, AvPh 572 and AvPh 903.

[4] In several groups of corresponding passages, words of brightness are either absent or remarkably infrequent. See Appendix II for line references for each passage: for Cepheus, one word in AvPh; for Pisces, one word in AvPh; for Perseus, two words in GPh; for Lyra, one word in GPh; for the transition from North to South, three words in CPh; for Lepus, two words in AvPh; for Cetus, one word in APh, one word in CPh, three words in AvPh. The other corresponding passages from the poems contain no words of brightness. These passages are problematic since the absence of brightness words does not seem to be due to the natural darkness of the constellations. In addition, the location of the passages in relative proximity to the transition from constellations in the North to constellations in the South is not a logical explanation. The lack of brightness words may be dependent on the brevity of the passages themselves, but is is important to note that these passages are exceptional for their small amount of brightness words.

[5] GPh 532-567 expands this list of zodiacal signs by means of mythical references to the Golden Fleece (Aries), Europa (Taurus), Castor and Pollux (Gemini), Hercules (Cancer), the Nemaean lion (Leo), Orion (Scorpio and Chelae), Egipan (Sagittarius), Deucalion (Aquarius) and Syrian Dercete (Pisces). Only three words of brightness may be found in this list in GPh 549 (lumine fulgens) and GPh 553 (ardet). For a discussion of the controversial nature of this passage, see Chapter VIII, n. 17.

[6] Compare Le Boeuffle, "Le vocabulaire latin", III, 1060 who notes that Latin writers rarely classify the stars according to their apparent magnitude; terminology, therefore, is literary, not technical.

[7] Other examples of notable embellishment may be found, for example in the discussion of the constellations Argo, Hydor, Ara and Sagittarius. For appropriate line references see Appendix II.

[8] This passage from Germanicus' translation is more compact in length. Germanicus omits the reference to Γνύξ found in APh 575 and the

mention of the late setting of Boötes in APh 585: (κεῖναί οἱ καὶ νύκτες
'ἐπ' ὀψὲ δύοντι' λέγονται). Germanicus, furthermore, corrects APh 578
by stating that only the tail of the serpent of Ophiuchus is above the
horizon (GPh 593). Compare Hipparchus' commentary on the line in 2.2.10.

[9]The brightness word, liquidus, is used in this capacity only
in Germanicus' translation. Compare Lucretius, De Rerum Natura 5.281.

[10]According to A.E. Kober, "Some Remarks on Color in Greek Poetry",
CW, 27 (1934), p. 190 and H. Osborne, "Colour Concepts of the Ancient
Greeks", British Journal of Aesthetics, 8 (1968), p. 270, the Greeks fa-
vored gaudy colors and violent contrasts of color, but, more importantly,
they paid more attention to brilliance and intensity than to actual colors.
The Romans, however, seem to have had a different color sensibility.
T.R. Price, "The Color System of Vergil", AJPh, 4 (1883), p. 2 notes that
to the Greeks, life was identified with light, but to the Romans, color
was the sign of life. J. André, Étude sur les terms de couleur dans la
langue latine (Paris: C. Klincksieck, 1949), p. 19 concurs. He holds
that color played an important role in Latin poetry, but not in Homeric
poetry.

[11]H. Blümner, "Die rote Farbe im Lateinischen", ALLG, 6 (1889),
p. 415 comments that the color red later came to be applied to gleaming
or shining objects. The majority of examples of rutilus and rubere in
the translations have been considered to be brightness words.

[12]Compare André, p. 389. A taste for color is a question of the
individual author's temperament as well as the genre itself.

[13]The Greek terms for color have been derived from the color terms
discussed by M. Platnauer, "Greek Colour Perception", CQ, 15 (1921), pp.
153-162. The Latin color terms have been derived from André's discussion.
The Latin words fucus and taeter, which are not discussed by André, have
been included in this investigation. In addition, the category which
André calls "blue-purple" has been noted here as "blue". Reviews of An-
dré's book have been very mixed. A. Carnoy in a review in AC, 20 (1951),
p. 221 calls the book "un modèle du genre". E. Laughton, CR, 1 (1951),
pp.204-205 criticizes many aspects of the book: its "mechanical approach",
contradictions and inaccuracies. It is possible, however, to make use
of André's study, but caution should be employed.

[14]André, p. 400 notes a general preference among the Romans for
warm hues, such as yellow. On p. 401, he comments that the association
of red and yellow, characterized especially by the juxtaposition of crim-
son and gold, is a proof of the increase in luxury among the ruling classes
at Rome. In AvPh, by comparison, a prominent juxtaposition of blue and
gold is evident.

[15]André, p. 399 comments that the evolution of chromatic vocabu-
lary, which is paralleled by the taste of the Romans for color, developed
in the second half of the first century B.C. under the influence of tech-
nology, art, Alexandrianism and poetry. This interest in color is obvious
in GPh as compared with CPh. Further development is seen in AvPh.

[16]André, p. 388 notes that Vergil prefers the color term albus for white, while Ovid prefers albus, niueus and candidus in that order.

[17]According to André, p. 388, Vergil favors ater while Ovid gives prominence to ater and niger.

[18]According to Platnauer, p. 159, the most extensive use of the Greek word πορφύρεος is for descriptions of the sea. It seems to convey a sense of both color and motion. E. Irwin, Colour Terms in Greek Poetry (Toronto: Hakkert, 1974), p. 28 comments on the unusual and interesting breadth of the word, and J.H.H. Schmidt, Handbuch der lateinischen und griechischen Synonymik (Amsterdam: Hakkert, 1889, repr. 1968), p. 226 notes that πορφύρεος is red without the yellow tint. Other Latin writers use the corresponding Latin color term, purpureus, most frequently, according to André, p. 388.

[19]O. Weise, "Die Farbenbezeichnungen bei den Griechen und Römern", Philologus, 46 (1888), p. 597 states that rutilus designates the brightest red.

[20]André, p. 388 notes that Vergil prefers the color terms fuluus and croceus for yellow. Ovid, by comparison, favors fuluus and flauus.

[21]In AvPh 572, all words except nec are connected with color or brightness in some way: lumina; nec claro flagrat rubor aureus astro.

[22]J. Soubiran, ed., Aviénus: Les Phénomènes d'Aratos (Paris: Les Belles Lettres, 1981), pp. 20-21, n. 3 comments that another reading for pax is fax. He accepts the reading pax aurea, however, since the expression summarizes well, in his view, the two ideas of calm and the restoration of sunlight.

[23]André, p. 388 notes that the most commonly used color term for blue used by Vergil and Ovid is caeruleus.

[24]Irwin, p. 79. Κυάνεος is a puzzling word, and much debate has taken place in attempts to discover its true meaning. Irwin, p. 81ff. presents the argument that κύανος, a decorative material, was not blue glass paste, but niello, a black amalgam. Since κύανος and κυάνεος are related words, it would make sense to define κυάνεος primarily as black or dark, rather than as blue. Schmidt, p. 211 also notes the connection of the two words.

[25]André, p. 164. The Oxford Latin Dictionary notes that the word caeruleus is formed by dissimilation from *caelulum, the diminutive of caelum. Weise, p. 598 argues, however, that this is not its proper etymology.

[26]Compare André, pp. 166-168.

[27]For the association of black and death, see André, p. 169. Compare the translation of Soubiran (Aviénus) for caeruleas puppes (AvPh 420), "les poupes sombres" and that for caerulei . . . caloris (AvPh 397), "de l'azur torride". Compare also the caerulea puppis of Charon in Aeneid 6.410. In this case, the phrase may be defined as "the ship which brings the dead". H.E. Butler, ed., The Sixth Book of the Aeneid (Oxford: Blackwell, 1920), p. 153 defines the word as "dark", but F. Fletcher, ed., Vergil: Aeneid VI (Oxford: Clarendon Press, 1955), p. 63 defines the word as "coal-blue". R.D. Williams, ed., Virgil: Aeneid I-VI (London: Macmillan, 1972) and E. Norden, ed., P. Vergilius Maro: Aeneid Buch VI (Leipzig and Berlin: Teubner, 1926) do not comment on the line, Norden, however, translates, "und drehte seinen dunklen Zahn zum ufer".

[28]For the baleful influence of Sirius see, for example, Hippocrates, Airs, Waters, Places 11.

[29]André, p. 174 comments that liuidus signifies a troubled, unpleasant blue. The word glaucus can also mean "green", according to André, pp. 176-177. Compare Aulus Gellius, Noctes Atticae, 2.26.18.

[30]André, p. 185 notes that uiridis is appropriate to the sea with its many changing aspects.

[31]Pliny, Naturalis Historia, 9.7.20 comments that the dolphin is the swiftest of all animals but does not refer to the color of the animal. Aelian in his On the Characteristics of Animals also does not mention its color. Compare Aeneid 8.673 where Vergil refers to the animals as clari delphines. But this usage of clarus in reference to dolphins is unusual since no other Latin authors seem to use either a color term or a word of brightness to describe the dolphins. Avienus' use of uiridis for dolphins seems to be unique. André, p. 187 notes a connection between uiridis and uirens, "full of vigor and liveliness". We could therefore translate the phrase delphinos uirides as "lively dolphins", although a chromatic meaning for uirides seems more appropriate.

[32]Too few examples of color terms are found in CPr to allow similar deductions. The distribution of color terms in GFr, however, resembles that found in GPh. In each half of Germanicus' poem, no color is emphasized to any great extent, and blacks and reds are not found in any notable amounts. This continuity in the poem stands in sharp contrast to the practice discovered in Avienus' translation.

[33]Schmidt, p. 221 notes that the word ἐρυθρός is the most common term for red in the Greek language.

[34]Kober, p. 189 criticizes APr 797 and APr 798 as examples of the failure in Greek literature to distinguish shades of color.

[35]André, p. 123 notes that the word fuscus meant "dark" or "black" to the Romans. Compare Avienus' use of caeruleus for the crow (AvPh 900).

[36]Sirius is actually a binary star with a faint white dwarf companion. Compare Le Boeuffle, "Le vocabulaire latine", III, 1064-1065; Le Boeuffle calls Sirius a blue-tinged white star. Compare Manilius, Astronomica 1.409: frigida caeruleo contorquet lumina uultu.

[37]Platnauer, p. 153 states that the word μέλας is the commonest of the Greek words used to designate black. Homer, for example, uses it 175 times. Platnauer, p. 154 notes that the tragedians also use the word extensively.

[38]J. Soubiran, ed., Cicéron: Aratea, Fragments Poétiques (Paris: Les Belles Lettres, 1972), p. 189, n. 7 calls CPh 418, "expression boursouflee". E. Panichi, Gli Aratea e i Phaenomena (Milan and Rome and Naples: Società Editrice Dante Alighieri, 1969), p. 117, n. 200 compares the use of uis in CPh 370 with Lucretius, De Rerum Natura 3.296 which is not appropriate. W.W. Ewbank, The Poems of Cicero (London: University of London Press, 1933), p. 200 also notes that CPh 321 may be compared with De Rerum Natura 3.296.

[39]This usage of uis may properly be compared to the use of uis in De Rerum Natura 3.296. C. Bailey, Titi Lucreti Cari De Rerum Natura Libri Sex (Oxford: Clarendon Press, 1947), I, 143 notes that uis like the Greek word βία adds a touch of strength or power. Soubiran, Cicéron, p. 178 confirms this meaning in his translation, "un uiolent Favonius soufflant du couchant est à craindre".

[40]Compare also AvPh 921-922, AvPr 1410-1411, AvPr 1418-1419, AvPr 1473, AvPr 1535-1536, AvPr 1586, AvPr 1682 for similar uses of the word uis as "violence or force".

[41]Compare Manilius, Astronomica 1.310 and 1.809.

[42]Compare also GFr IV.10-11 on the benevolent influence of the planet Jupiter in the sign of Cancer.

[43]Cicero's translation contains no astrological references. Compare Chapter I for a discussion of the absence of astrological content in the Phaenomena itself.

[44]Because of its special nature, the word uis has not been included with the previously discussed brightness words.

[45]Soubiran, Aviénus, p. 160 translates this line as "et ici le puissant faisceau de sa chevelure prodigue à l'univers sa lumière étincelante". If we define uis as "brightness" we may translate: "and here the shining brightness of the comets furnishes its mixed light for the world".

[46]Compare also APh 286, ἵς ηελίοιο; neither CPh 60, GPh 289 nor AvPh 654 translate this phrase exactly. Soubiran, Aviénus, p. 158 translates the word uis in AvPr 1557 as "la puissance". For other uses of uis with the meaning of "brightness" compare AvPh 6 and AvPr 1550-1551.

[47]For a similar poetic combination of light and dark, compare the English line, "deep divine dark dayshine of the sea", quoted without reference in M.P. Hodnett, "The Sea in Roman Poetry", _CJ_, 15 (1919), p. 74.

[48]An exception is found in _AvPr_ 1744-1745 in which the word _laeti_ corresponds with the words χαίρειν κέ τις οΐσσαιτο in _APr_ 1006. In addition, although the word _laeta_ in _GPh_ 107 has no direct correspondence in _APh_, the phrase εὔκηλος φορέοιτο (_APh_ 100) may have influenced its appearance in the Latin poem.

[49]For other uses of the word _laetus_ in the sense of joyful, see _GPh_ 101 and _GPh_ 555. The words _laetissimus_ (_GPh_ 541) and _laetus_ (_GFr_ IV.20) mean "causing joy" or "propitious".

[50]C. Santini, _Il segno e la tradizione in Germanico scrittore_ (Rome: Cadmo Editore, 1977), p. 43 comments on the meaning of _laetus_ as "bright". _Laetus_, because of its special nature, has not been included with other words of brightness.

[51]Soubiran, _Cicéron_, p. 172 translates the phrase _laeti solis_ as "le soleil radieux".

[52]Compare the translation of the line in A. Le Boeuffle, ed., _Germanicus: Les Phénomènes d'Aratos_ (Paris: Les Belles Lettres, 1975), p. 19: "les deux ailes sont radieuses". Compare also D.B. Gain, ed., _The Aratus Ascribed to Germanicus Caesar_ (London: The Athlone Press, University of London, 1976), p. 60: "both his wings are bright".

[53]For an interesting conflation of the meanings "joyful" and "bright" see _ALPh_ 394: _pariterque laeti et absque periculo conuolutae_. In this line, _laeti_ translates the Greek adjective χαροποί (_APh_ 394), which can mean either "bluish-gray-eyed" or "bright-eyed". The author of the _Aratus Latinus_ may have used _laeti_ in its poetic sense of bright, but it is more likely that the similarity of the words χαροπός and χαίρω caused some confusion and hence the translation of _laeti_ as "joyful". The other translators do not render the Greek word with Latin _laetus_.

[54]For similar uses of the word _tristis_ as "sorrowful" see also _GPh_ 152, _tristissima tellus_. In _GPh_ 701, _tristes_ means "bringing sorrow". The word in _GFr_ II.5 and _GFr_ III.2 also means "bringing sorrow".

[55]Compare also _AvPh_ 57, _AvPh_ 860, _ALPh_ 231 and _ALPr_ 1120.

[56]Santini, pp. 42-43 notes that _tristis_ may mean "dark"; in such passages, Germanicus seems to have added a subtle psychological nuance by considering luminosity as an element of joy.

[57]Compare the translation of _tristis_ in these lines found in Soubiran, _Aviénus_, p. 119: "avec cette figure tragique". Soubiran does not account for the element of darkness.

[58] Compare the translation of Le Boeuffle, Germanicus, p. 43: "ni sa poitrine fâcheusement velue". The use of fâcheusement for tristi, however, is both inappropriate and misleading.

[59] Compare also AvPh 70. In this line the word crinis refers to vines laden with grapes.

[60] Soubiran, Aviénus, p. 209, n. 3 calls this description "apocalyptique, trés excessive et inexacte". True comets never had such an appearance. Avienus, however, seems to have had a particular interest in comets. Compare Soubiran, Aviénus, Appendice II, pp. 297-299.

[61] Soubiran, Aviénus, pp. 275-276, n. 9 stresses the fact that these objects are meteors, not comets. The corresponding lines in the original (APh 926-927) refer to shooting stars. J. Martin, Arati Phaenomena (Florence: La Nuova Italia Editrice, 1956), p. 124 calls these "shooting stars", comets. Compare AvPr 1688-1689 with Vergil, Georgic 1.365-367. The similarity between Georgic 1.367 and AvPr 1699 is striking and both passages, according to Soubiran, refer to meteors, not comets.

[62] Gain, p. 117 comments that the word crinis is used of the rays of a constellation's stars, but he does not discuss the novelty or the implications of such a usage. Le Boeuffle, Germanicus, p. 39 translates GPh 624 literally: "s'élance de l'Océan avec toute sa chevelure le Bouvier". But "hair" or even "head" contradicts the original description found in APh 609 that Bootes rises άθρόos, "as a whole" and not simply with his hair or head.

[63] The related word crinitus is used to describe the brightness of Corona in GPh 87. Le Boeuffle, Germanicus, p. 6, n. 4 comments that crinitus is used in this line without a doubt because of the diffused glow which is spread around this constellation by this group of faint stars. Gain, p. 85, n. 87 comments that crinis and crinitus seem to support each other; he translates crinita (GPh 87) as "its rays like hairs". Le Boeuffle, Germanicus, p. 6 translates the word as (l'étoile) "chevelue". Although crinita may be a subtle reference to the nearby Coma Berenices, it is more likely that the word, supported by the use of lucet, expresses the brightness of the constellation.

[64] Compare Soubiran's translation (Aviénus, p. 97): "une chevelure de flamme embrasée de rayons ardents".

[65] Compare Soubiran's translation (Aviénus, p. 104): "leur feu n'est guère vif et leur brasier se fane en rayons émoussés". Soubiran, p. 191, n. 6 comments that this lack of brightness is contested by CPh 323 and GPh 89.

[66] Soubiran, Aviénus, p. 162 translates this reference literally: "les cheveux de Phébus". Another use of crinis is present in AvPh 612-613. Soubiran, Aviénus, p. 119 translates the words arenti crine aestas

as "l'été avec sa crinière torride". This is a puzzling reference since aestas can only be said to have hair or brightness if it is an example of metonymy for the sun. One example of crinis may be found in ALPh 221, Equi crinem; the phrase is a mistranslation of the word ʿΙππουκρῆνην (APh 221).

[67]Compare the discussion of "brilliant words" in Cicero's poetry in P.C. Brush, "Cicero's Poetry", (Ph.D. dissertation, Yale University, 1971), pp. 182-197. Compare also his indices of "brilliant words", Greek-to-Latin and Latin-to-Greek, pp. 273-277.

[68]The general prominence of nouns of brightness is due largely to occurrences of the word lumen, especially in the fifth foot of the verses. 48 examples of lumen in the fifth foot in CPh (8.8% of the total number of verses) are present.Two examples of the dactylic forms can be found in the fifth foot in CPr. GPh, by comparison, uses the dactylic forms of lumen in the fifth foot in only 11 lines (1.5% of the total lines), while AvPh uses them in 18 lines (1.4% of the total lines). Compare J. Marouzeau, Traité de stylistique latine (Paris: Les Belles Lettres, 1946), p. 317. In this work, Marouzeau states that 47 examples of the use of lumina (lumine, luminis) may be found in 546 lines of Cicero's translation. By comparison, in the third book of the Aeneid, such words occur in 27 lines, often in standard arrangements. Compare also J. Soubiran, "L'hexametre de Cicéron, le groupe des deux derniers pieds", Pallas, 3 (1955), p. 43 which states that 47 examples of lumine or lumina may be found in Cicero's poem.

[69]The word honos, which seems to have a meaning of brightness, has not been included in the lists of nouns signifying brightness. There are seven occurrences in GPh and five in AvPh. Santini, p. 40 considers honos to be a representation of Germanicus' tendency to present physical reality in human terms. Not only do stars have brilliance; they have honor, a concept applicable to the sphere of human action.

[70]The word radius is here included with words of brightness since it means a "beam or ray of a shining object". See CPh XVI.4, CPh 313, GPh 336, AvPh 918.

[71]The word acies is included as a word of brightness because it has the same meaning as radius.

[72]In two instances (GPh 151, GPh 336), accendere is used with aestas more in reference to heat than to light. In all cases, words designating heat have been kept distinct from words of brightness, and for this reason these examples have not been included with brightness words in GPh.

VII.

GREEK WORDS AND LATIN ARCHAISMS

The presence of a tension in the individual translations between

the rendering of a Greek poem into Latin and the composition of Latin verse

itself may be inferred from the examples we have isolated in metre, sound,

compound adjectives and astronomical vocabulary where the Latin translations

either diverged from the original or shared close features with it. The

employment in the Latin translations of Greek words, that is, Greek words

found in Latinized form, allows us to estimate further the degree to which

the translators confronted this tension by imparting either a "Greek flavor"

or a "Roman flavor" to their works. Greek words occupy an important place

in the Latin translations because they are a common element which links the

translations directly to the original. In the following table Greek words

used in the Latin works have been divided into three general categories:

Greek proper names, ordinary Greek words and Greek astronomical terms. Fre-

quencies are based on the total number of words found in each of the Phaeno-

mena sections and a complete listing of Greek words used in the translations

has been placed at the end of this chapter.[1] The figures in Table I on the

following page indicate a noticeable distinction between the treatment of

Greek words in CPh and ALPh and the treatment of Greek words in GPh and AvPh.[2]

First, Cicero makes use of a smaller number of Greek names in his translation

than Germanicus and Avienus and gives the least prominence to the categories

of ordinary Greek words and Greek astronomical terms. Similar results are

evident for ALPh. GPh and AvPh, in contrast, have a relatively high frequen-

TABLE I

	CPh	GPh	AvPh	ALPh
Total number of words	3468	4641	8537	4123
Number of Greek Greek names	130	308	444	148
Frequency	3.7%	6.6%	5.2%	3.6%
Number of ordinary Greek words	17	34	119	17
Frequency	0.5%	0.7%	1.4%	0.4%
Number of Greek astronomical terms	5	21	138	15
Frequency	0.1%	0.5%	1.6%	0.4%
Total number of Greek words	152	364	701	180
Frequency	4.4%	7.8%	8.2%	4.4%

TABLE II

	CPr	GFr	AvPr	ALPr
Total number of words	168	1387	3501	2351
Number of Greek names	2	61	60	6
Frequency	1.2%	4.4%	1.7%	0.3%
Number of ordinary Greek words	3	5	43	4
Frequency	1.8%	0.4%	1.2%	0.2%
Number of Greek astronomical terms	1	17	53	1
Frequency	0.6%	1.2%	1.5%	0.04%
Total number of Greek words	6	83	156	11
Frequency	3.6%	6.0%	4.5%	0.5%

cy for Greek names, and AvPh further shows a distinction by emphasizing the categories of ordinary Greek words and Greek astronomical terms. Similarly, GPh and AvPh demonstrate the highest frequencies for the total occurrence of Greek words while CPh and ALPh display frequencies which are approximately half the figures found for the two other Latin poems. This lower figure for CPh seems to suggest a greater unwillingness on the part of Cicero to use words of Greek origin in this part of his translation. The comparatively low figure for ALPh may also demonstrate a similar unwillingness to go beyond the Greek original, or perhaps, an inability to use Greek words correctly at this late stage in Latin letters.

The corresponding figures for the occurrences of Greek names, Greek ordinary words and Greek astronomical terms from the Prognostica sections of the four Latin works found in Table II on the preceeding page show some noteworthy differences. Greek words, in general, are less prominent in the second halves of the works than in the first halves. The frequencies for the number of Greek names in use in the works are less in every case and the decrease is most notable in AvPr (1.7%) as compared with AvPh (5.2%). The relative absence of Greek names from the second halves of the works, however, is not surprising since the astro-meteorological content of the Prognostica portions allows for less exploitation of the Greek names than the Phaenomena portions which have as their subject the various constellations in the heavens. The percentages for the ordinary Greek words used in the Latin works, however, show less uniformity. Only AvPr demonstrates a treatment of ordinary Greek words similar to that of AvPh, while both GFr and ALPr use ordinary ordinary Greek words with less frequency than GPh and ALPh. The percentage for ordinary Greek words in

CPr, in comparison, is greater than that discovered for CPh, but it is impossible to say whether this is due to a different intended lexical emphasis in this part of the poem or to the fragmentary state of CPr itself. Greek astronomical terms are also used with corresponding frequencies in both AvPr and AvPh, but with greater frequencies in CPr and GFr in comparison with CPh and GPh. More importantly, figures for the total occurrence of Greek words show clearly that Greek words are less favored in general in the Prognostica sections than in the Phaenomena portions of the works.[3] These lower frequencies are due largely to the avoidance of Greek proper names.

A closer investigation of the use of Greek names in the translations provides further insight into the individual handling of the names in each of the Latin works.[4] The following table contains information on the presence of Greek names other than the names of constellations or celestial bodies. The figures derived for these non-constellation names are indicative of the differing degree of freedom with which the translators used Greek words not strictly necessary for conveying the content of the original.

TABLE III

	CPh	GPh	AvPh	ALPh
Total different Greek names	50	107	156	28
Non-constellation names	16	59	109	6
Frequency	32.0%	55.1%	69.9%	21.4%

Among the four Latin translations, ALPh deomonstrates the least innovation in the use of Greek names which are not connected with the constellations. But CPh displays the lowest frequency for the verse translations in the use

of such additional Greek names. In GPh, by comparison, Greek names which do not denote constellations are found with a higher frequency (55.1%), and in AvPh, the frequency is greater still (69.9%). This high occurrence of Greek names representing persons or things other than celestial bodies in AvPh is due not only to the expanded nature of the poem, but also to the original approach of Avienus and his desire, perhaps, to provide a "Greek touch" to the verses.

The appearance of Greek names alone in Latin verse is a dramatic technique which conveys a strong "Greek flavor" to the line, but the combination of these Greek names in Latin form with other words of Greek origin further heightens the Greek tone of the Latin verses in much the same way as a $5\frac{1}{2}$ caesura or a typically Greek metrical pattern such as DDDD. Statistics have shown that Cicero's translation makes little use of Greek names or Greek words in general and stylistic analysis supports this feature of the poem. In CPh, for example, fourteen verses contain more than one Greek proper name. Yet in comparison with GPh which exhibits forty-four verses with more than one Greek name and AvPh which has fifty-nine such examples, Cicero appears unwilling to give prominence to Greek names by using them in combination in a single verse. Another indication of this unwillingness can be seen in six verses from his translation, in each of which Cicero uses a proper name referring to the Greeks:

CPh VI.1: Ex is altera apud Graios Cynosura uocatur,

CPh XIV: Quem claro perhibent Ophiuchum nomine Grai.

CPh XXVIII.1: Has Graeci stellas Hyadas uocitare suerunt.

CPh 5: Andromedae signum, Deltoton dicere Grai

CPh 222: Ante canem Graio Procyon qui nomine fertur.

CPh 317: Zodiacum hunc Graeci uocitant, nostrique Latini

These examples account for almost half of the lines in CPh which employ Greek names in combination. But in contrast Graius (Grai, Graecus) together with another Greek name is found in only two lines out of forty-four in GPh and in only two lines out of fifty-nine in AvPh.[5] Cicero's lines in contrast, therefore, seem almost apologetic, since in them he explains, perhaps unnecessarily, the source of the Greek names.

Cicero also appears unwilling to employ Greek names together with ordinary Greek words in a single verse. Only two instances of such a combination are present in CPh:

CPh XXIII.1: Hoc motu radiantis etesiae in vada ponti

CPh 446: Hanc illi tribuunt poenam Nereides almae,

Cicero consistently tries to deemphasize the presence of Greek names in his verses.[6] But Germanicus' translation, in contrast, contains thirteen examples of the use of a Greek name plus an ordinary word of Greek origin:

GPh 72: hunc illi Bacchus thalami memor addit honorem.

GPh 156: excipiantque sinus zephyris spirantibus auras.

GPh 243: stridentis auras, niueus quas procreat Haemus.

GPh 276: cygnus uel Ledae thalamis qui illapsus adulter

GPh 322: paucis sideribus; tulit hic Atlantida nymphen

GPh 409: prona ratis sorbetque inimicum Nerea prora,

GPh 504: At medium Oriona secat spiramque priorem

GPh 537: Europe, thalamis et uirginitate relicta,

GPh 554: Cochlidis inuentor cuius Titania flatu

GPh 589: Cum primum Cancrum Tethys emittit in auras,

GPh 666: Doridos et Panopes spectasset stulta choreas.

GPh 671: Tum fera, quam dextra portat Centaurus, in auras

GPh 705: Nereidas pontumque fugit caeloque refertur.

One example of the use of two ordinary Greek words in a single verse is
found:

GPh 204: ignea substricta lucet qua zonula palla.

All of the words of Greek origin are distinctly and unquestionably
Greek in the effect which they produce in the verses. Among these verses,
however, only two, GPh 504 and GPh 705, possess the characteristically Greek
5½ caesura. Its presence in so few lines of this type, suggests, therefore,
that in general the combination of an ordinary Greek word with another word
of Greek origin provides a sufficiently "Greek touch" to the lines.

The greatest proportion of Greek names used in combination with ordin-
ary Greek words is found in Avienus' translation:[7]

AvPh 71: O mihi nota adyti iam numina Parnasei!

AvPh 143: compta Lycaoniis includunt plaustra choreis.

AvPh 237: flexilis et medium cingit spiris ophiuchum;

AvPh 258: famosa Arcadici testans commenta tyranni.

AvPh 309: delphinos virides et physeteras anhelos,

AvPh 345: Tiphys, Agenoreo color hinc mentirier ostro

AvPh 346: incipit Assyriumque bibunt noua uellera fucum,

AvPh 449: prima tibi ut flexi linquatur spira draconis,

AvPh 496: lymfa camenalem fudit procul Hippocrenen

AvPh 550: Troicus haurit aquas funditque ubi ephebus ab urna

AvPh 647: Laomedontiadae se dextra tendit ephebi;

AvPh 757: puppe refulgentem. neque enim Thessala cumba

AvPh 759: surgent Oceano, velut alto a gurgite nautae

AvPh 838:   conlidunt.   alii Phrygium nam subter ephebum

AvPh 871:   si boreae stringat rutili coma fulgoris auras.

AvPh 899:   spirarum medio gestat cratera coruscum.

AvPh 906:   hauriet Oceanus, trahit ingens machina caeli

AvPh 915:   pronus Atlantei procul in uada caerula ponti;

AvPh 944:   primigeno statuit.   sic zonam Graecia sollers

AvPh 1005:   spira anguis levis hic craterque, tenacia corui

AvPh 1117:   cedit delphinus pelago ceditque sagitta,

AvPh 1120:   eminet Eridanus, ponti procul efflua tinguit.

AvPh 1128:   Nec, cum flagratas emittunt marmora chelas

AvPh 1150:   absoluunt pelago.   mediae tum serta coronae

AvPh 1169:   Tethye et occidui tegitur Padus aequore ponti.

AvPh 1212:   expediunt pelago postremique agminis hydra

AvPh 1220:   ac primam rutili spiram serpentis eoo

AvPh 1260:   delphinum patulas promit capricornus in auras.

AvPh 1319:   explorare notos et tuto carbasa ponto

Only one example of the use of the 5½ caesura (in AvPh 346) is evident among
these verses. Again, the absence of this characteristically Greek caesura
suggests that the combination of a Greek name and an ordinary Greek word
alone suffices to provide a Greek effect to a verse.

Further evidence of a possible Graecizing purpose in Avienus' trans-
lation is found in lines which use ordinary Greek words together with Greek
astronomical terms. This combination of Greek words is unique to Avienus'
translation and consistent with the emphasis upon the two categories which
our statistics have already demonstrated. The following six verses employ
Greek astronomical terms (polus, aetherius, aerius, aethra and astrum) and

ordinary Greek words:

AvPh 402: flabra polo, tunc cyaneum stata flamina caeli

AvPh 488: et quatit aetherias primis modo cruribus auras.

AvPh 930: Quattuor aerios zonae cinxere meatus,

AvPh 993: zonarum, cani specie quae lactis in aethra

AvPh 1233: hauserunt pelago, toto lepus occidit astro.

AvPh 1305: vix penetrat pelagus neque summa totus ab aethra

Since no one of these lines contains a $5\frac{1}{2}$ caesura or a notably Greek metrical pattern, we may assume that the combination of Greek words was sufficient to recall the Greek original to the mind of the audience. Finally, two lines from Avienus' translation use two ordinary Greek words each, in combination:

AvPh 69: conueniat, cum ueliuolo dare carbasa ponto

AvPh 307: fluctibus instabile et glauci uada turgida ponti,

The relatively small use of two ordinary Greek words in a single verse in the poem of Avienus, just as in the works of both Cicero and Germanicus, seems to suggest that this technique was not as much favored in the rendering of a "Greek touch" to a verse as the combination of a Greek name with an ordinary Greek word. This combination was used more frequently in GPh and AvPh but less in CPh.[8]

The greater prominence of Greek words used in various combinations in the Phaenomena sections of the poems is further emphasized if we compare the usage of such combinations in the Pronostica sections. CPr, for example, provides no examples of Greek words used together in a verse while AvPr contains nine instances of combinations of Greek words, four in which a Greek name is used with an ordinary Greek word:

AvPr 1375: cingula cum ueheret pelagus procul Orionis

AvPr 1591: pars Hyperioniae rutilat facis hicque comarum

AvPr 1602: at matutini si Phoebum litoris acta

AvPr 1763: orchilos infestus si floricomis hymenaeis

In four instances an ordinary Greek word is found with a Greek astro-
nomical term (astrum, aethra, aether and aer):

AvPr 1398: adfore quem pelago comitem sibi dixerat astrum.

AvPr 1540: zonarum taeter fuerit si tractus in aethra.

AvPr 1687: stellarumque comas rumpi procul, aethere celso

AvPr 1824: adluitur pelago, coquit altas siccior aer

One verse contains two ordinary Greek words:

AvPr 1394: nauita et actaea retinet statione phaselum,[9]

Each of the three combinations, Greek name plus ordinary Greek word, ordi-
nary Greek word plus Greek astronomical term and ordinary Greek word plus
ordinary Greek word, provides a definite "Greek touch" to the lines in
which they appear, but their low incidence indicates that their presence
is more significant in the first halves of the Latin poems than in the sec-
ond halves.

The use of Greek words, therefore, is greater in the Phaenomena
sections of the Latin translations and, in particular, in the poems of
Germanicus and Avienus. Cicero disregards, in general, the employment of
Greek words and this suggests that he sought to create a new Latin Phae-
nomena of his own. Further support for the conclusion that he took an
innovative approach to the translation of Aratus' poem is apparent in
his use of Latin archaisms, that is, the use of obsolete forms, words or

constructions from the Latin language.[10]   The Latin verse translations

make varying use of archaisms, as the following table indicates:

TABLE IV

	CPh	GPh	AvPh
Number of words	3468	4641	8537
Number of archaisms	35	0	15
Frequency	1.0%	0	0.2%

	CPr	GFr	AVPr
Number of words	168	1387	3501
Number of archaisms	2	0	4
Frequency	1.0%	0	0.1%

In comparison with the other translators, Cicero employs archaisms with re-
latively greater frequency.[11]   Significantly, the percentages for the occur-
rence or archaisms in AvPh and AvPr are very low in comparison with the use
of Greek words, and in GPh and GFr, Latin archaisms are non-existent.

Cicero's use of archaisms also exhibits a variety which is not to
be found in Avienus' translation.   In CPh several different categories of
archaisms can be found.   One group of archaisms is comprised of words in
which a final s has been dropped before an initial consonant in the follow-
ing word:

CPh VIII.2: toruu'	CPh 92: lustratu'
CPh XXII.3, 263: magnu'	CPh 97: Aquiloni'
CPh 25: elapsu'	CPh 121: Orioni'

Another six archaisms in CPh belong to a group composed of verbs with an

archaic -ier form of the passive infinitive:

CPh XVIII.2: fabricarier   CPh 226: labier

CPh 33: dicier   CPh 231: metirier

CPh 80: uersarier   CPh 269: conuertier

Four words may be grouped together because they possess the archaic genitive singular ending -ai:

CPh 57: terrai   CPh 372: Aquilai

CPh 179: Aquai   CPh XV.5, 216,
                                   278, 324, 418: Nepai[12]

Several archaisms, in addition, are not readily categorized. The words possiet (CPh 304), potesse (CPh 106) and clino (CPh 53, 86, 259), which is unknown elsewhere, are all archaic forms. The archaic form genus is used for genu, "knee" (CPh XXI, 27, 45); stinguo is found in CPh II.2 and suesco in CPh XXVIII.1, mŏdō in CPh IX.1, ĕiŭs in CPh XV.2, and the form quis for quibus in CPh 314 and 329.[13] Fewer examples of archaisms are present in CPr: aquai (CPr IV.1) and stinguo (CPr I.2). But since this portion of Cicero's translation is so fragmentary, it is impossible to know whether Cicero intended to emphasize archaisms to the same degree in both halves of his translation.

Avienus, like Cicero, employs archaisms in his translation, but unlike Cicero, he does not use a wide variety of such forms. Out of the fifteen archaisms in his translation, only one is a word using the archaic infinitive form, mentirier (AvPh 345); the other fourteen are all different forms of the pronoun olle (AvPh 116, 252, 264, 537, 606, 853, 870, 920, 924, 943, 1043, 1046, 1215, 1306).[14] Similarly, in AvPr the only archaisms present are four examples of the archaic form olle (AvPr 1418, 1490, 1606, 1796).

In the use of Greek words and archaisms in the three Latin poems, it is clear therefore that the employment of Latin archaisms is inversely proportional to the employment of Greek words. While a high incidence of Greek words in GPh and AvPh is matched by a relatively low occurrence of archaisms, a lower incidence of Greek words in CPh is paralleled by a higher incidence of Latin archaisms. Is this relationship simply the product of the literary ages in which the individual poets were writing? Or may it also be the result of individual preference on the part of Cicero, for example, to produce a translation which was, in spite of the restrictions imposed by the necessary Greek technical vocabulary and Greek metrical rules, a new Latin poem? The subsequent translators, Germanicus and Avienus, do not follow Cicero in the lexical composition of their own Latin Phaenomena, but instead choose to emphasize the lexical features of the Greek original by acknowledging in their translations words of Greek origin.[15] Lexicon is only one aspect in the resolution of the tension present in the translation of a Greek poem into Latin. Cicero's introduction of Latin archaisms partly reduces the tension by providing a Roman atmosphere to his poem. Germanicus and Avienus, on the other hand, look to Aratus and not to Ennius in their lexical choices. But this creates its own tension. In the next and final chapter we will investigate how these two authors compensate in other areas for their emphasis on the original in their use of Greek vocabulary.

TABLE A

GREEK NAMES IN CICERO'S TRANSLATION

Greek Names in CPh

Aegaeus	422
Alcyone	35
Andromeda	2, 5, 18, 140, 257, 413, 436
Arcti/toe	XVI.2, XXII.1, XXIX.1, 79, 441
Arctophylax	XVI.1, 359
Arcturus	XVI.4, 186, 187, 395
Argo	126, 134, 396, 466
Argolicus	277
Asterope	36
Boötes	XVI.1, 394
Bacchicus	423
Cassiopeia	XXX.1, 23, 443
Celaeno	35
Centaurus	203, 207, 218, 278, 410, 450, 476
Cepheus	52, 82, 415, 417, 437, 461
Chelae	3, 210, 293, 323, 393, 403
Chius	422
Corona	XIII.1, 351, 353, 409, 448
Creterra	219, 292, 387
Cyllenius	381
Cynosura	VI.1, XXIX.1
Delphinus	92, 99, 382
Deltoton	5
Draco	VIII.2
Electra	36
Engonasin	XII.1
Eridanus	145
Etesiae	XXIII
Graecus	XXVIII.1, 317
Graius/Grai	VI.1, XIV.1, 5, 212, 222
Helice	XXV.2
Hyades	XXVIII.1
Hydra	214, 292, 376, 387, 397, 449, 478
Leo	XXII.3, 217, 263, 321, 370
Maia	36
Merope	35

Nereides	446
Oenopion	425
Ophiuchus	XIV.1
Orion	3, 81, 102, 121, 149, 291, 368, 420, 435
Pallas	302
Perseus	20, 21, 256, 465
Phaëthon	147
Phoenices	VII.1
Procyon	222, 377, 470
Scorpios	77, 208, 430
Taurus	XXVII.1, XXVIII.2, 103, 290, 330
Taygete	35
Titan	60, 343
Zodiacus	317

Greek Names in CPr

Hyperion	I.1
Phatnē	II.1

TABLE B

GREEK NAMES IN GERMANICUS' TRANSLATION

Greek Names in GPh

TABLE C

GREEK NAMES IN AVIENUS' TRANSLATION

Greek Names in AvPh

Agenoreus	345	Cecropius	66, 373
Alcides	382, 890	Celaeno	580
Alcyone	580	Centaurus	874, 894, 983, 1151, 1214, 1264, 1270
Amphitrite	702		
Amphi-tryonides	178	Cepheus	440, 441, 641, 687, 1161, 1165, 1198, 1227
Andromeda	460, 465, 471, 520, 538, 557, 563, 769, 771, 956, 958, 1156, 1194, 1278	Cetos/-osus	100, 770, 1299
		Charon	211
Anubis	283	Chelae	250, 388, 525, 1007, 1047, 1128, 1142, 1146, 1188
Aones	66, 489, 497		
Aphidnis	372	Chelys	618, 632
Apollp	622	Chius	251, 1136, 1180
Aratus	173	Chimaera	490
Arcadicus	258	Cilix	1252
Arctos	39, 101, 138, 149, 200, 358, 693, 772	Cirrha	76
		Cnidus	53, 102
Arctophylax	257	Cocytus	210
Arcturus	270, 852, 1091, 1132, 1306	Crater	899, 1005, 1123
		Corona	199, 247, 1080, 1083, 1150, 1211
Argo	756, 765, 982, 1126, 1247, 1250		
		Cresius	129
Ariadnaeus	198, 247	Creta/-aeus	108, 407
Ascraeus	500	Curetes	112
Assyrius	346	Cygnus	635, 636, 1153, 1258
Astraeus	279	Cyllenaeus	1116
Atlantis	915, 1076	Cynosura	122, 124, 136, 443, 509, 685
Atlantides	604		
Atlas	574	Delphinus	309, 700, 1117, 1260
Atticus	1046	Deltoton	528
Bacchus	197	Dercete	541
Bambycius	542, 646	Deucalioneus	218
Bassaridus	627	Dictaeus	113
Boötes	257, 273, 352, 849, 1131, 1303	Doris	1207
		Draco	140, 147, 160, 169, 193, 201, 449
Boreas/-alis	435, 540, 549, 686, 719, 771, 871, 873, 951, 957, 964, 1159		
		Electra	580, 583, 587
		Eos	166, 875, 914, 1079, 1115, 1141, 1220, 1310
Callisto	254		
Calpetana	1024		
Caria	455	Epidaureus	207
Cassiopeia	450, 565, 1202	Erebus	30, 95, 214
Castor	373	Erichthonius	410

Greek Names in AvPh

Greek Names in AvPh

Taurus	65, 422, 431, 434, 435, 439, 546, 720, 1003, 1050, 1291, 1293, 1295, 1297
Taygete	580
Tethys	100, 1122, 1169
Themis	278
Thesidus	211
Thespius	501
Thesprotis	385
Thessala	757, 982, 1133
Thetis	61
Thraecus/ -eicius	401, 563, 653, 692, 770
Tiphys	345
Tirynthius	187
Titan	127, 1063
Tithoneus	1025
Triccaeus	206
Troia	585
Troicus	550
Tyrius	124
Zephyrus	860

Greek Names in AvPr

Amphitrite	1399	Phoebē/-beius	1326, 1505, 1524, 1628
Arctos	1804		
Bistonius	1695	Phoebus	1354, 1374, 1396, 1435, 1555, 1556, 1602, 1621, 1645
Boreas/-alis	1475, 1510, 1571, 1664		
Calpetana	1622		
Cecropeus	1370, 1766	Pleiades	1806
Cynthia	1333, 1446, 1465, 1471, 1490, 1500	Riphaeus	1669
		Sirius	1376
Eurus	1532, 1683, 1693	Strymonius	1746
Graecia	1371, 1653	Thetis	1729
Harpalus	1367	Threicius	1768
Hesperus	1759	Titan	1357
Hymenalis	1763	Zephyrus	1462, 1469
Hyperionius	1591		
Libya	1470		
Libycus	1724		
Meton	1370		
Notus	1463, 1464, 1470, 1480, 1587, 1668, 1694, 1724		
Olympus	1863		
Orion	1375		

TABLE D

GREEK NAMES IN THE ARATUS LATINUS

Greek Names in ALPh

Andromeda	198, 230, 234, 246 354, 484, 629, 647, 705
Apollo	776
Arctofilax	579, 721
Arcturus[16]	27, 30, 36, 48, 51, 92, 140, 184, 227, 407, 579, 721
Ariadne	72
Boötes	92, 96, 137, 581, 608
Cepheus	280, 631, 633, 649, 675
Cetus	354, 357, 366, 368, 387, 390, 502, 630, 647, 720, 726
Cassiopeia	189, 654
Centaurus	431, 447, 505, 626, 661, 663, 695, 700
Cepheus	179, 183, 310
Corona	71, 74, 572, 574, 660, 686
Cygnus	275, 278, 312, 599, 691,
Delphinus	316, 598
Draco	46, 70, 187
Gala	476
Galaxia	511
Helice	30, 40, 51, 59, 161, 216, 218, 637
Leo	148, 151, 446, 491, 545, 590, 681
Lyra	268, 269, 494, 597, 615, 674
Oceanus	26, 48, 553, 567, 582, 593, 635, 651, 675, 706
Orion	232, 310, 518, 587, 636, 639, 730
Perseus	249, 484, 685, 687, 711
Pliades	255

Scorpios	85, 304, 307, 403, 438, 506, 546, 621 625, 635, 643, 646, 667
Sidon	44
Sirius	331, 340
Taurus	167, 174, 177, 322, 515, 517, 549, 713, 714, 719

Greek Names in ALPr

Oceanus	746, 885
Orion	754, 755
Pliades	1066
Zephyrus	934

TABLE E

ORDINARY GREEK WORDS IN THE
FOUR LATIN TRANSLATIONS

Ordinary Greek Words in CPh[17]

aura	202, 272, 280
gubernaclum	XIII.7, 157
nauta	VII.4, 75, 90, 132, 190
pelagus	72
poena	446
poeta	33
pontus	XXIII.1, 62
prora	128, 135

Ordinary Greek Words in CPr

pontus	III.7
salum	III.3
scopulus	III.6

Ordinary Greek Words in GPh

aura	156, 243, 246, 524, 571, 589, 671, 700
chorea	666
cochlis	554
cymbala	36
lympha	152
nauta	170, 172, 294, 541
nymphe	322
palla	204
pelagus	358, 404
poena	205, 650
poeta	647
pontus	293, 362, 705
prora	353, 409
spira	504
thalamus	72, 276, 323
zona	231
zonula	204

Ordinary Greek Words in GFr

aura	IV.64, IV.123
nauta	IV.121
pontus	IV.67
purpureus	IV.4

Ordinary Greek Words in AvPh

adytus	71
aura	241, 268, 350, 384, 473, 488, 515, 603, 871, 1037, 1260
barathrus	99
camurus	429
carbasa	62, 69, 677, 1319
chalybs	341
chaos	21
chorda	619
chorus	37, 143, 592
coeaneus	732
coma/-ans	81, 492, 593, 613, 891, 1009, 1181
cometa	594
cumba	757, 918
cyaneus	402
ephebus	550, 647, 832, 838
fucus	346
gaza	314
glaucus	307
gubernaclum	767
gyrus	134
lampas	256
lympha	496
machina	84, 562, 906
marmor	644, 1128, 1155
mysticus	491
nauta	663, 759, 869
oestrus	1175
ostrus	345
pelagus	306, 403, 669, 682, 696, 800, 1057, 1117, 1150, 1162, 1171, 1212, 1233, 1253, 1277, 1305, 1313
peplum	936
phaselus	655
physetera	309
poena	466, 1189, 1208
pontus	69, 307, 404, 507, 631, 668, 676, 707, 915, 1120, 1140, 1169, 1199, 1249, 1314, 1319
prora	919
spira	141, 146, 184, 237, 248, 449, 897, 899, 1005, 1090, 1220

thalamus	599
tyrannus	177, 258
zona	930, 933, 944, 963, 993, 1015

Ordinary Greek Words in AvPr

acta	1602
actaeus	1394
adamanteus	1509, 1555
aula	1508
aura	1410, 1414, 1468, 1707, 1848
chaos	1550
coma	1566, 1585, 1591, 1687
cometa	1813
eritheus	1764
lampas	1579, 1632, 1752
marmor	1474, 1805
orchilos	1763
pelagus	1361, 1375, 1398, 1486, 1559, 1589, 1692, 1734, 1793, 1824
phaselus	1394
pontus	1390, 1536, 1565, 1684, 1727, 1820
ulula	1703
zona	1518, 1540

Ordinary Greek Words in ALPh		
aeolus	275	
angelus	523	
chorus	256	
demon	188	
gubernaculum	155	
nauta	345, 419	
ophren	13	
purpureus	158	
prora	350	
spelunca	187	
thorax	85	
zona	229, 232, 518, 671, 712	

Ordinary Greek Words in ALPr	
pelagus	1025
scilla	1060, 1063
zona	754

TABLE F

GREEK ASTRONOMICAL TERMS IN THE
FOUR LATIN TRANSLATIONS

Greek Astronomical Terms in CPh		Greek Astronomical Terms in CPr	
aer	48	aer	IV.11
aether	88, 134		
astrum	XXXII.4, 162		

Greek Astronomical Terms in GPh		Greek Astronomical Terms in GFr	
aer	569	aer	III.10, IV.29, IV.46,
aether	87, 222, 254, 324,		IV.92, IV.154
	423, 525, 707	aether	III.5, IV.33, IV.39,
astrum	40, 106, 247, 266,		IV.52, IV.75
	344, 367, 484, 560,	astrum	IV.24, IV.58, IV.72,
	570, 594, 676		IV.78, IV.114, V.1
polus	22, 479	polus	IV.74

Greek Astronomical Terms in AvPh

aer/-ius	9, 221, 317, 386,	astrum	3, 8, 53, 102, 164,
	462, 511, 548, 567,		269, 274, 281, 352,
	600, 728, 829, 857,		436, 506, 510, 513,
	889, 930, 1040, 1075,		520, 534, 572, 637,
	1114, 1247, 1300		706, 725, 729, 774,
aether	4, 7, 30, 52, 87,		776, 781, 790, 796,
	290, 428, 488, 509,		902, 1017, 1045,
	575, 636, 695, 712,		1057, 1073, 1093,
	726, 771, 787, 792,		1115, 1191, 1226,
	916, 1127, 1134,		1233, 1286, 1293,
	1137		1318
aethra	2, 44, 77, 106, 131,		
	159, 187, 351, 442,	polus	60, 62, 93, 119, 220,
	467, 518, 543, 596,		283, 402, 409, 441,
	601, 611, 716, 733,		443, 459, 590, 720,
	749, 831, 836, 861,		849, 859, 910, 917,
	892, 912, 922, 949,		970, 1135, 1201,
	972, 993, 1001, 1104,		1237, 1263, 1272
	1114, 1145, 1194, 1216,		
	1257, 1295, 1305, 1323		

Greek Astronomical terms in AvPr

aer	1340, 1385, 1409, 1421, 1427, 1442, 1452, 1463, 1464, 1507, 1552, 1606, 1659, 1675, 1733, 1737, 1748, 1796, 1814, 1824,
aether	1356, 1366, 1687, 1711, 1724, 1791, 1810,
aethra	1327, 1429, 1431, 1451, 1512, 1533, 1540, 1603, 1612, 1759, 1769, 1807, 1817, 1871
astrum	1357, 1376, 1398, 1408, 1515, 1545, 1564, 1655, 1870 (twice)
polus	1350, 1648, 1680, 1851

Greek Astronomical Terms in ALPh

aer	68, 79, 349, 469, 471, 618, 846
aethra	390
astrum	98, 142, 156, 191, 228, 277
polus	24

Greek Astronomical Terms in ALPr

aethra	1151

NOTES

[1]Several lines from CPh which have been omitted from consideration because they are incomplete or corrupt contain words of Greek origin: CPh I (Musa), CPh IV.2 (polus), CPh VI.2 (Helice), CPh XVI.5 (Boötes) and CPh 463 (Orion). AvPh 819, which has also been omitted, contains the Greek word, pontus.

[2]J. Marouzeau, Quelques aspects de la formation du latin littéraire (Paris: Klincksieck, 1949), p. 137 gives percentages of Greek words in various authors: 10% in Catullus' poems, 11% in the non-lyrical poems of Horace, 14% in Vergil's Eclogues, 20% in the satires of Perseus. The basis for these statistics is not provided but these frequencies may be considered high in comparison with figures found for CPh (4.4%), GPh (7.8%) and AvPh (8.2%), but low in comparison with figures for the poems based on the number of lines for CPh (approximately 20%), GPh (approximately 40%) and AvPh (approximately 45%).

[3]Compare figures compiled for Vergil's translation of Aratus' Prognostica in Georgic 1.351-465. On the basis of number of words, Greek words in this section of Vergil's poem account for 4.6% of the total number of words. On the basis of number of lines, Greek words are found in 24.3% of the lines. Both figures more closely resemble those found for CPh (see n. 2) while both CPr and AvPr, which make less use of Greek words in general also show close similarities with Vergil's use of Greek words in his translation. Based on the number of words, the frequency for Greek words in CPr is 3.6%, and in AvPr, it is 4.4%. Based on the number of lines, CPr displays a frequency of 22% and AvPr a frequency of 26.4%. The relatively high frequencies for Greek words in GPh and AvPh (see n. 2) therefore seem to be a deliberate departure.

[4]F.-O. Weise, Die griechischen Wörter im Latein (Leipzig: Zentral-Antiquariat der Deutsches Demokratischer Republik, 1882, repr. 1964), p. 247 comments that only very few names went unchanged from Greek to Latin. Evidence from the Latin translations of Aratus' Phaenomena, however, seems to show otherwise.

[5]Compare GPh 40: Dat Grais Helice cursus maioribus astris, GPh 335: Sirion hanc Grai proprio sub nomine dicunt, AvPh 124: namque Helice Graios, Tyrios Cynosura per altum and AvPh 826: subuehitur. notium uocat istum Graecia piscem. Similarly in Vergil's Aeneid, little use is made of lines which contain Graecus or related words together with a Greek name. See, for example, Aeneid 1.530, 3.163, 3.210 and 8.135.

[6]Marouzeau, Quelques aspects, p. 137 comments that many of the words which were considered foreign at one time later came to be considered as usual components of the language. Although pontus and poena may not have

been considered as Greek words by Cicero's time, it is important to con-
sider them as such for the translations of the Phaenomena since these
poems had as their model, a Greek work. For pontus, see, for example,
Ennius, Annales 225 and for poena see Ennius, Annales 100.

[7]Some of these ordinary Greek words had long histories in the Latin
language before the times of Germanicus and Avienus, but this does not de-
value their importance as lexical indications of the presence of a Greek
model. Nympha, for example, is found in Livius Andronicus, Odyssey 17;
palla in Plautus, Asinaria 929; adytus in Accius, Tragedies 618; ephebus
in Plautus, Mercator 61; machina in Ennius, Annales 621 and ostrum in
Lucretius, De Rerum Natura 2.35. Aura, found in both GPh and AvPh, may
not have been felt as a Greek word in Germanicus' or Avienus' day, but
its use instead of uentus, of non-Greek origin, seems to signify an at-
tempt to deliberately emphasize a word of Greek origin. Cicero in his
translation uses the Greek word aura only in verses together with a Latin
proper name: Aquilo (CPh 86, 141, 253, 280), Auster (CPh 272) and Ara
(CPh 202). This technique serves to lessen the Greek effect of the word
aura.

[8]Several examples of the use of an ordinary Greek word used in com-
bination with a Greek name can be found in ALPh:

    ALPh 85: Scorpionis oculos et thorace stans
    ALPh 187: prima ingressa est speluncam magni Draconis
    ALPh 232: Vergilasque zona circumciditur Orionis
    ALPh 275: Iam enim ad uitam precurrit aeolus Cygnus
    ALPh 518: hinc uero et zona dilucida Orionis

[9]ALPr contains one example of an ordinary Greek word used together
with a Greek name: quantum a zona usque ad nouissimum Orionem (ALPr 754).

[10]J. Marouzeau, Lexique de la terminologie linguistique (Paris:
Libraire Orientaliste Paul Geuthner, 1933), p. 31. The prose translation,
Aratus Latinus, has not been included in this discussion because such
poetic forms do not figure prominently in this translation.

[11]The difference in the use of archaisms is even more apparent on
the basis of the total number of lines in the translations. According to
this criterion, the frequency for the use of archaisms in CPh is 6.5%, in
AvPh, 1.1%, in CPr, 7.4% and in AvPr 0.7%. A. Cordier, Études sur le
vocabulaire épique dans l'Énéide (Paris: Les Belles Lettres, 1939) gives
figures for archaisms in other Latin poems: Vergil, Aeneid Book 7, 5.4%
(p. 30); Livius Andronicus, Odyssey, 61%), Ennius, Annales, 20% (p. 8,
n. 1); Cicero's translation of Homer, 11% (p. 17).

[12]Compare the use of the usual genitive form, -ae, in Nepae (CPh 183).

[13]See J. Soubiran, Cicéron: Aratea, Fragments Poétiques (Paris:
Les Belles Lettres, 1972), pp. 96-98. For further discussion of archaisms
in Cicero's poems see also W.W. Ewbank, The Poems of Cicero (London:

University of London Press, 1933), p. 9 and T. Peck, "Cicero's Hexameters",
TAPhA, 28 (1897), p. 66. Ewbank, p. 9 scans eius as eĩus.

[14]According to the Thesaurus Linguae Latinae and the Oxford Latin
Dictionary, the word olle is the archaic equivalent of ille of which it
is apparently the etymological ancestor. Compare Ennius, Annales 555.

[15]Some may argue that Cicero's relatively high use of archaisms
signifies an attempt on the part of the poet to render in Latin the
"archaic flavor" of the original, which was noted, for example, by Cal-
limachus in his Epigram 27: ʿΗσιόδου τό τ᾽ ἄεισμα καὶ ὁ τρόπος. Only
three of the thirty-five archaisms in CPh actually translate corresponding
archaic forms from the Greek poem: Aquiloni' (CPh 97) for βορέω (APh
319), genus (CPh XXI) for γούνασιν (APh 145) and genus (CPh 45) for γούνατι
(APh 272). Although the total effect of the Latin archaisms may serve
as a reminder of the Greek poem, it is important to note that the archa-
isms used in Cicero's poem allow his poem to be placed securely within
the history of Latin literature.

[16]Words in this translation which are mistranslations of the Greek
word ῎Αρκτοι have been included with the Latin word Arcturus.

[17]The words aplustra (CPh XXIV.1) and aplustria (GPh 345, 489, 620,
684) have not been included with ordinary words of Greek origin. Cordier,
Études sur le vocabulaire épique, p. 119 notes that these words are
probably derived from the Greek word ἄφλαστον through the Etruscan language.

VIII.

CONCLUSION: THE EMERGENCE OF A ROMAN PHAENOMENA

The practice of sensus de sensu translation at Rome led to an additional tension in the demand that the translator match or surpass the excellence of the Greek original on which the Latin work was based. One way of meeting this demand was to use the Greek model as a form upon which to expand and add distinctly individual features. Previous chapters have illustrated a dual approach to the Phaenomena on the part of the verse translators.[1] The poets both incorporated the Greek features of the original or included "Greek touches", as we have found in their treatment of metre and Greek words, and they employed their own innovations and variations in an effort to create original Latin poetry. This second approach was seen most clearly in the use of alliterations, compound adjectives and epithets, astronomical vocabulary and, for Cicero, Latin archaisms. The overall tendency in translation from the Greek in the three poems, therefore, seems to be toward the creation of new Latin Phaenomena rather than toward a slavish homage to the Greek original. This chapter shows the final progression toward the creation of individual Latin poems, for Germanicus, in the area of references to aspects of Roman life, and for Avienus, in the area of borrowings from the previous Latin translations. It concludes with a study of the ways in which each of the translators alter the emphasis of the original by reshaping its theme, thereby demonstrating the diversity and individuality to be found even among three works so closely related as translations of the

same Greek poem.

1. References to Roman Life

While the translations of both Cicero and Avienus do contain spe-
cific references to various aspects of Roman life (principally Roman reli-
gion),[2] Germanicus' poem exhibits greater diversity in such references.
These are used with great effectiveness in creating a Roman _Phaenomena_ with
distinctly contemporary overtones. Germanicus, for example, includes sev-
eral allusions to general features of Roman life. He provides the added de-
tail, unsupported in Aratus' verses, that Virgo passes judgment, _iura da-
bas_ (GPh 110), thereby reflecting the preeminence of law and legal concerns
in Roman life.[3] And he uses the word _metae_ to describe the course of sev-
eral of the constellations and the sun; Aries is seen to race with Ursa Major
in the heavens: _distantis cornu properat contingere metas_ (GPh 228), and
the sun is similarly pictured in its yearly course: _diuersasque secat metas
gelidi Capricorni_ (GPh 7). _Metae_ were the turning posts in the Circus. This
metaphorical use of _metae_ in Germanicus' verses is an allusion to the increas-
ing importance of the games at Rome in the early Empire and, since the Circus
of which the _metae_ were a part was sometimes used as a metaphor for astrology,
to the pervasive influence of astrology in all areas of Roman life.[4]

Germanicus also uses words designating aspects of Roman religion in
order to add a "Roman touch" to his verses. The word _carmen_, "religious in-
cantation", is used to describe Germanicus' opinion of the intent of Aratus'
poem (GPh 1-2):

> Ab Ioue principium magno deduxit Aratus
> carminis; at nobis, genitor, tu maximus auctor;

Aratus' _Phaenomena_ is a religious "song" in praise of the god Zeus. The same

word appears in the invocation to Virgo (GPh 98-99):

> Quam te, diua, uocem? Tangunt mortalia si te
> carmina nec surdam praebes uenerantibus aurem,

No such pious reference is present in the corresponding lines from Aratus'
poem. The religious word numen, "spirit", is found in the description of
the supplication of the constellation Engonasin (GPh 68): . . . suppli-
citer passis ad numina palmis.[5] The toiling unidentified figure calls upon
the "spirits" or "divinities"; this is Germanicus' explanation of his pos-
ture. The formal technique of repetition and alliteration which is
found in Roman prayers is also present in the Virgo passage: teque tuumque
canam terris uenerabile numen (GPh 102) and (GPh 127-128):

> degeneres semper semperque habitura minoris,
> quid me, cuius abit usus, per uota uocatis?

The repetitious teque tuumque and semper semperque as well as the alliter-
ative phrase uota uocatis recall early Roman prayers such as those found,
for example, in Cato's De Agricultura.[6] Furthermore, the word primitiae
(GPh 4) denotes the Roman custom of gathering and offering the first fruits
of an undertaking, especially an agricultural undertaking, while piacula
(GPh 200) indicates atonement or sin-offerings.[7] Finally, the use of the
phrase deuotus poenae to describe Orion (GPh 650) is reminiscent of the rit-
ual deuotio, whereby a man sacrifices himself in order to win the aid of the
gods for his community. Ironically, however, Orion has vowed himself to the de-
ity Vengeance or Punishment because of his impulsive action, and the result
is eternal punishment in the heavens.[8]

Many other religious references in Germanicus' translation
have political overtones, especially as subtle reminders of the religious
revival supported by Augustus. Germanicus mentions the Lares and Penates,

traditional tutelary deities associated with the home and the storehouse: _tecta hominum et puros sine crimine, diua, penatis_ (GPh 109) and _nulliusque larem nullos adit illa penatis_ (GPh 124).[9] In addition to their identification as part of the old Roman religion, the Lares and Penates here allude to Augustus' reforms, since it is known that Augustus dedicated a shrine to the Lares on the Sacra Via and one to the Penates on the Velia.[10] The mention of Juno in two places, moreover, recalls Augustus' establishment of a temple to Juno Regina on the Aventine. Germanicus writes: _numine Iunonis tutus cum fugit Iason_ (GPh 351) and _sidere donauit, Cancer, Saturnia Iuno_ (GPh 545). These references to the goddess are without parallels in the original verse of Aratus. And finally, several lines seem to allude to the _Ludi Saeculares_, games which were held in 17 B.C. at the instigation of Augustus to commemorate the fifth _saeculum_ of Rome and the supposed arrival of a new Golden Age.[11] Germanicus uses the phrase _aurea saecula_ to describe the Golden Age during which Virgo enjoyed a happy relationship with the human race: _Aurea pacati regeres cum saecula mundi_ (GPh 103).[12] Germanicus also refers to the two deities who were most prominent in the celebrations: _Haud patiens sed enim Phoebi germana repente_ (GPh 653). Aratus simply names her Ἄρτεμις (APh 644), but Germanicus calls her "sister of Phoebus". This circumlocution recalls a similar reference in Horace's _Carmen Saeculare_ 75: _doctus et Phoebi chorus et Dianae_. Germanicus' possible allusion to Horace' poem, which was written for the occasion of the _Ludi Saeculares_, seems to suggest both the religious and political mood of the time, joined as they were in the person of Augustus.[13]

More potent references, however, are made both to previous political problems and to contemporary political propaganda. In several places,

distinct allusions are made to the upheavals of the recent civil war at
Rome. In his translation of APh 108-110, which discusses the absence of
strife and battle in the Golden Age, Germanicus adds some overtly "Roman
touches". The perils of war are noted by means of some important keywords,
which were used by other Latin authors in reference to the civil wars (GPh
112-115):

> Nondum uesanos rabies nudauerat ensis
> nec consanguineis fuerat discordia nota,
> ignotique maris cursus priuataque tellus
> grata satis, . . .

The word rabies, "rage", depicts clearly the horror of war, and its use in
the translation may be compared with its employment in Horace's Carmen 3.24.
25-26:

> o quisquis uolet impias
> caedis et rabiem tollere ciuicam,

Horace's lines provide advice to Augustus, and thus the word rabies may be
seen as a reference not only to the civil war but also to Augustus himself.
The phrase discordia nota also recalls the civil war and may be compared to
Vergil's Eclogue 1.71-72:

> . . . en quo discordia ciuis
> produxit miseros: his nos conseuimus agros!

Here the word ciuis resembles Horace's use of civicus and makes the civil
war theme all the more poignant.[14] The words priuataque tellus, further-
more, recall the land confiscations which became synonymous with the mis-
fortunes of civil war. According to Germanicus, private land was sufficient
for each individual in the Golden Age. Thus by extension we may infer a
new political order: there is no longer a need in the Golden Age of Augus-
tus to evict farmers from their land in order to provide lots for discharged
veterans. That such evictions and confiscations had been carried out on the

order of Augustus, when he was still called Octavian, is conveniently ignored by the poet.[15]

More politically oriented propaganda may be found in Germanicus' translation. He mentions the Augustan peace (GPh 16): pax tua tuque adsis nato numenque secundes and the benefits of this peace (GPh 9-10):

> si non tanta quies, te praeside, puppibus aequor
> cultorique daret terras, procul arma silerent?

With Augustus as princeps, safety on the seas and freedom to plant crops are guaranteed. And Germanicus also alludes to the fertility of Italy during the new Golden Age of Augustus by discussing the fertility of land during the mythical Golden Age (GPh 117-118):

> . . . fructusque dabat placata colono
> sponte sua tellus . . .

This statement, absent from the corresponding lines of Aratus' poem, gains its political import when we remember the reverence for the Italian peninsula depicted in both the literature and art of the Augustan age.[16] Finally, Germanicus alludes to the apotheosis of Augustus himself (GPh 558-560):

> Hic Auguste, tuum genitali corpore numen
> attonitas inter gentis patriamque pauentem
> in caelum tulit et maternis reddidit astris.

Like Romulus, Augustus is said to have been carried off to the heavens from the midst of an astonished crowd, but unlike the first king of Rome, Rome's first emperor is borne on the back of Capricorn his own natal sign.[17] Through references to contemporary politics, Roman religion and Roman life in general, therefore, Germanicus' translation differs from the translations of Cicero and Avienus and stands out as a new Roman Phaenomena which is more responsive to contemporary events and influences.

2. Similarities Among the Translations

Similarities in diction or phrasing are evident among all three verse translations -- but to a significantly different degree.[18] Germanicus, for example, rarely borrows phrasing from the translation of his predecessor Cicero. But one instance is found in the discussion of constellations found on the Tropic of Cancer. If this imaginary circle were divided into eight parts, five parts would be seen above the horizon and three would be below it (GPh 473-475):

> Hunc octo in partis si quis diuiserit orbem,
> quinque super terras semper fulgere notabit,
> abdi tris undis breuibusque latere sub umbris.

These verses are similar to the corresponding verses from Cicero's translation (CPh 268-270):

> Hunc octo in partis diuisum noscere circum
> si potes, inuenies supero conuertier orbe
> quinque pari spatio partis, tris esse relictas,

but quite unlike AvPh 970-972:

> ista poli partis si discernatur in octo,
> quinque superuoluit se partibus, at tribus alti
> intrat stagna sali . . .

Germanicus and Cicero share a common use of the words hunc octo in partis in identical positions at the beginning of the line, different forms of the verb diuidere (diuiserit in GPh 473 and diuisum in CPh 268), the word tris, and the words quinque and orbis in identical positions in the verses. Avienus' lines, on the other hand, resemble the verses from Cicero's and Germanicus' poems only in the use of quinque in the first position of the line. For this reason, the dependence of Germanicus upon the earlier translation of Cicero for this passage is almost certain.

Notable similarity between the translations of Germanicus and Cicero is also evident in a discussion of those constellations which rise and set

with the sign of Leo. Germanicus describes Procyon (GPh 611: totiusque
Canis rabidi uestigia prima) in ways which resemble the original Latin de-
scription found in CPh 378: ante Canem: inde Canis uestigia prima uiden-
tur. The outstanding similarities in these two lines are the common use of
the word Canis and the phrase vestigia prima. AvPh 1112, a direct transla-
tion of APh 595, by comparison, shows no relationship at all to these two
lines: et procyon primique pedes canis ignicomantis. The Lesser Dog is
called by his Greek name, Procyon, and the words primi pedes are used in-
stead of uestigia prima.[19] A larger number of similarities in translation,
however, are found between the poems of Avienus and Cicero. Avienus de-
scribes the wide visibility of the constellation Orion in the night sky
(AvPh 721-722):

> suspicit Orion. neque quisquam nocte serena
> transierit, celso late se cardine pandit,

Cicero portrays the constellation in a similar fashion (CPh 104-105):

> Quem qui suspiciens in caelum nocte serena
> late dispersum non uiderit . . .

Germanicus' lines, in contrast, escape any similarity to Cicero's verses;
he writes (GPh 329-330):

> . . . Non ulla magis uicina notabit
> stella uirum sparsae quam toto corpore flammae:

Avienus and Cicero use the words nocte serena in identical positions at the
end of the line, the word late and different forms of the verb suspicere
(suspicit in AvPh 721 and suspiciens in CPh 104). Germanicus' different
handling of the lines suggests that the borrowing evident in Avienus' poem
is deliberate and not accidental.

Avienus also demonstrates a familiarity with Cicero's translation in
his description of the constellation Draco (AvPh 153): sed saetosa duplex

adolet duo tempora fulgor. Cicero had already depicted the two shining stars on the temples of Draco's head in CPh IX.2: uerum tempora sunt duplici fulgore notata. Both Avienus and Cicero use the words duplex and fulgor in different cases but share the form tempora. Comparison with the corresponding lines from Germanicus' translation (GPh 56-57) serves to further emphasize the similarities between Cicero's and Avienus' verses:

> Ardent ingentes oculi, caua tempora claris
> ornantur flammis, mento sedet unicus ignis.

Germanicus only shares a common use of the form tempora which in itself does not seem significant. Avienus, therefore, seems to have followed the translation of Cicero rather than that of Germanicus.

Finally, the discussion of the constellation Cygnus provides another opportunity for Avienus to borrow phrases from Cicero's poem. Avienus borrows the vivid description of the Swan from CPh 48: quae uolat et serpens geminis secat aera pinnis when he writes in his own translation (AvPh 636): Namque et sidereis cygnus secat aethera pinnis. Both lines share the description of the Swan as a living bird expressed in the words secat aera pinnis (CPh) and secat aethera pinnis (AvPh). Germanicus, in contrast, fails to use a similar phrase in his translation and writes instead (GPh 275-277):

> Contra spectat Auem, uel Phoebi quae fuit olim
> cygnus uel Ledae thalamis qui illapsus adulter
> furta Iouis falsa uolucer sub imagine texit.

In Germanicus' verses, a mythological allusion has replaced the image of a bird soaring through the heavens, which appears in the passages from the poems of Cicero and Avienus.[20]

Nonetheless, the largest number of similarities in translation (more than fifty) is found for Avienus and his immediate predecessor, Germani-

cus.[21] Through these borrowings and, to a lesser extent, through his bor-
rowings from Cicero's translation, Avienus manages to create a new Phaeno-
mena of his own, but one which demonstrates its indebtedness both to a
Greek model and to the two preceding Latin translations. Close similari-
ties in language are found in the description of the swift course of Aries:
Tum celer ille aries, longi qui limitis orbe (AvPh 508) which resembles
Inde subest Aries, qui longe maxima currens (GPh 224). The corresponding
use of the words aries longi qui (AvPh) and Aries qui longe (GPh) is fur-
ther emphasized by comparing the verse from Cicero's translation for the
same passage: Exin contortis Aries cum cornibus haeret (CPh XXXIII). Avie-
nus has chosen to borrow elements of phrasing from his immediate predeces-
sor rather than from Cicero. The description of the constellation Perseus,
moreover, exhibits nearly word-for-word borrowing on the part of Avienus:
dextera maerentis solium prope Cassiepiae (AvPh 565); this line may be compared
with Dextra sublata solium prope Cassiepiae (GPh 252). With the exception
of the use of the different forms dextera (AvPh) and dextra (GPh) and differ-
ent words in the second place of each verse, these verses are identical.
Each of the verses, interestingly, not only share similarities in phrasing
but also exhibit the same pattern of caesurae and diaereses, 5-7-1-4. The
corresponding line from Cicero's translation, in contrast, shows little sim-
ilarity: Hic dextram ad sedes intendit Cassiepiae (CPh 23). Cicero uses
sedes rather than solium and dextram in the second place of the verse rather
than the first. Only the name Cassiepiae is found in all three translations
as the final word of the verse.

Additional similarity of phrasing is evident in the description of
the constellation Centaurus which sets at the rising of the sign of Aquarius.

Avienus seems to have borrowed his description (parte poli trahit occi-
duum nox atra sub aequor, AvPh 1263) from Germanicus' poem (GPh 695): Auersum
Chirona trahit nox atra sub undas. Each verse uses the verb trahit and
each ends with remarkably similar phrasing (Nox atra sub aequor in AvPh
and nox atra sub undas in GPh). Cicero's translation, so different in com-
parison, emphasizes the close similarity of the lines from the poems of
Germanicus and Avienus   (CPh 475-476):

> . . . At contra signipotens nox
> cauda Centaurum retinens ad se rapit ipsa,

In these lines nox is modified by the word signipotens, not atra, and the
sea is not mentioned. Cicero has followed the original line (APh 695) more
closely, while Germanicus has provided the innovative approach which was
echoed by Avienus.

Avienus also adapts the language and thought of another passage
from Germanicus' translation. At the end of the prooemium to his poem,
Avienus announces that he is now prepared to raise his eyes to the sky and
tell of the constellations (AvPh 73-74):

> iam placet in superum uisus sustollere caelum
> adque oculis reserare uiam per sidera . . .

His comment has a direct precedent in the prooemium of Germanicus' transla-
tion (GPh 11-12):

> Nunc uacat audacis in caelum tollere uultus
> sideraque et mundi uarios cognoscere motus.

These lines share a common use of the words caelum and sidera as well as
similar, but not identical, use of impersonal constructions (iam placet
in AvPh 73 and nunc uacat in GPh 13) and infinitive constructions desig-
nating the act of seeing (uisus sustollere in AvPh 73 and tollere uultus
in GPh 13).[22] Avienus has taken Germanicus' specific reference to the bene-

fits of Augustan peace and used it in a more general context.

A similar conveyance of both language and thought from Germanicus' translation is present in Avienus' discussion of the constellation Eridanus where he tells the story of the unfortunate Phaëthon and his sisters (AvPh 793-794):

> illum prolixis durae Phaethontides alnis
> planxerunt . . .

These lines are comparable to GPh 365-366:

> . . . hunc noua silua,
> planxere ignotis maestae Phaethontides ulnis.

The lines share a common use of Phaethontides and forms of the verb plangere, but more importantly, Avienus has borrowed from the earlier poem the allusion to the metamorphosis of the Phaëthontides into trees. Germanicus calls them noua silva, "new forest", while Avienus describes them more vividly as durae, "hard", prolixis alnis, "with outstretched branches".[23] Cicero's translation, by comparison, contains no such interpretation, but concentrates instead on the sorrow of Phaëthon's sisters (CPh 147-148):

> quem lacrimis maestae Phaethontis saepe sorores
> sparserunt, letum maerenti uoce canentes.

They weep for their brother, scattering their tears into the river Eridanus, but they do not suffer, according to Cicero, the harsh fate stemming from their grief.

Finally, in one instance Avienus borrows phrases from Germanicus' poem but alters the intent of the passage. He states that a sufficient task for him will be to tell of the fixed constellations (AvPh 926-929):

> . . . non illas animis audacibus ergo,
> carmine non caeco temptabimus. hoc satis unum
> musa mihi, satis hoc longi labor egerit aeui
> si defixarum cursus et signa retexam.

Germanicus had written, however, that time and effort would determine if

he would be able to discuss the planets (GPh 444-445):

> Hoc opus arcanis si credam postmodo Musis,
> tempus et ipse labor, patiantur fata, docebit.

And Cicero had expressed a desire to write only of the fixed stars (CPh

234-236):

> quarum ego nunc nequeo tortos euoluere cursus:
> uerum haec, quae semper certo [e]uoluuntur in orbe
> fixa, simul magnos edemus gentibus orbes.

Avienus and Germanicus share a common use of the word labor[24] to describe

the effort involved to present the complicated motions of the planets and

a common reference to the Muses, but, in thought, Avienus more closely re-

sembles Cicero and Aratus who refuse to discuss the planets. Avienus, there-

fore, can be said to have borrowed selectively from Germanicus' verses while

still staying faithful to his own poetic purpose, which did not include as

for Germanicus, a discussion of the planets.[25]

Several passages from Avienus' translation, in addition, seem to sug-

gest that Avienus even borrowed phrases from both Cicero's and Germanicus'

poems.[26] Avienus, for example, describes the effect of Sirius upon healthy

and diseased crops (AvPh 736-741):

> marcebunt sata cuncta diu, namque indiga suci,
> si qua iacent, cedunt ualido penetrata calori,
> ac decoctorum languebunt germina florum.
> illa autem, interno quae sunt animata uigore,
> Sirius adtollit. blandusque inlabitur herbas
> Sirius et dulci nutrit tepefacta sereno.

Germanicus describes the same phenomenon (GPh 337-339):

> discernitque ortu longe sata: uiuida firmat,
> at quibus adfectae frondes aut languida radix,
> exanimat. . . .

And Cicero notes that Sirius strengthens healthy trees but strips those

which are lacking in vigor (CPh 116-119):

>Nam quorum stirpis tellus amplexa prehendit,
>haec augens anima uitali flamine mulcet;
>at quorum nequeunt radices findere terras,
>denudat foliis ramos et cortice truncos.

Avienus' lines share with those of Germanicus the word sata and several words from the same root: languebunt (AvPh) and languida (GPh), sunt animata (AvPh) and exanimat (GPh). Avienus and Cicero, in comparison, share the use of nam and the forms animata (AvPh) and anima (CPh). These passages are further linked in their similarities by a common use in the passages from the translations of Cicero and Germanicus of different forms of the word radix: radix (GPh) and radices (CPh).

Another passage which provides evidence of shared common features among the three verse translations may be found in the discussion of the constellation Deltoton. Cicero describes the constellation, which resembles the Greek letter delta (Δ), as the union of two equal sides and one shorter side (CPh 6-9):

>quod soliti, simili quia forma littera claret;
>huic spatio ductum simili latus extat utrumque
>at non tertia pars lateris: namque est minor illis,
>sed stellis longe densis praeclara relucet.

Germanicus describes the constellation more briefly (GPh 237-238):

>Tres illi laterum ductus, aequata duorum
>sunt spatia, unius breuior, sed clarior ignis.

And Avienus provides a more geometrical explanation by referring to the angles formed by the figure (AvPh 528-534):

>. . . simile in latus istud utrumque
>porrigitur, summum signo caput angulus artat
>et gemini suprema iugi uicinia mordet.
>tertia quae stantes sustentat linea ductus,
>parcior, haut simili sese sub limite tendit
>et contracta modum gemina face flammigerarum
>stellarum superat . . .

All three translations share a common use of the word _ductus_ and Germani-
cus' verses seem indebted to Cicero's through a common employment of dif-
ferent forms of _spatium_ (_spatio_ in CPh and _spatia_ in GPh) and the related
adjectives of brightness, _praeclara_ (CPh) and _clarior_ (GPh). But Avienus'
version shares more common features with Cicero's passage: a common use of
utrumque, _tertia_ and different forms of the word _stella_ (_stellarum_ in AvPh
and _stellis_ in CPh) as well as the similar phrases _simili latus_ (CPh) and
simile in latus (AvPh). Avienus, therefore, uses neither archaisms or ref-
erence to Roman life as extensively as Cicero or Germanicus to convey a
"Roman touch" to his verses. Instead, he creates a distinct Latin _Phae-
nomena_ of his own by borrowing from the translations of Cicero and Germani-
cus. This borrowing from within Latin literature, defined in the second
chapter as one aspect of the art of translation at Rome, allows the poet
to pay homage to the earlier poetic efforts of Germanicus and Cicero and to
place his own poem securely in the corpus of the Latin translations of the
original _Phaenomena_.

3. Rearrangement of Theme

The most important reason for translating Greek works into Latin,
as outlined in the second chapter, is the creation of new works of Latin
literature. Flexibility and originality are possible in the metrical hand-
ling of the Greek poem and in the lexical composition of the translation
itself. In addition, the translator may provide details drawn from Roman
life and allusions to previous Latin literature in order not only to trans-
late the content of the original but also to make his translation a rele-
vant and immediate Latin poem. But the most striking indication of creative
expansion and individuality lies in the area of the thematic content of the

translation, in the recurrence of a unifying theme in the poem itself which sets it apart from the original and the other translations.[27] For the Latin translations of the Phaenomena, rearrangement of theme is the final aspect of the resolution of the tension imposed by the translation of a Greek poem into Latin. Because they are more or less complete and similar in content, we may examine the Phaenomena portions of the four poems where the thematic emphasis is evident in eight highly descriptive corresponding passages from Aratus' poem and the verse translations: the prooemium, the story of Dikē and the ages of man, the description of the Pleiades, the presentation of the nameless stars under the constellation Lepus, the discussion of the constellation Capricorn, the description of the constellation Ara, the tale of Orion and Cassiopeia and the conclusion to the Phaenomena half of the poems.[28] The Latin translators, being essentially faithful to the form and order of the Greek model, use the same passages as Aratus for the exposition of theme in their own poems. Yet they do not use Aratus' theme, preferring instead to substitute different individual and unifying ideas for their own works which are consistently maintained as expressions of personal interest both for themselves and for the times in which they were writing.

(a) The Prooemium

An appropriate place for the presentation of the theme of a poem is the prooemium, and accordingly, Aratus establishes a theme of Zeus and justice for the Phaenomena in the introduction to his poem.[29] For the time and place where Aratus was writing his poem, the Macedonian court of Antigonus Gonatas, Zeus was an appropriate motif for the poem since the Macedonian royal family traced its lineage from Zeus himself.[30] Zeus is specifically

mentioned three times in the prooemium (APh 1, 2, 4) and to him are attri-

buted all the benefits enjoyed by mankind (APh 15): χαῖρε, πάτερ, μέγα

θαῦμα, μέγ' ἀνθρώποισιν ὄνειαρ. In addition, Zeus is praised as an active

power who has taught men about the raising of stock, agriculture and the

reading of the stars, which forms the basic subject matter of the poem

(APh 5-7, 10-13). Aratus, finally, includes a subtle reference to the just

character of Zeus at the end of the introductory passage (APh 17-18):

$$\text{. . . ἐμοί γε μὲν, ἀστέρας εἰπεῖν}$$
$$\text{ἧι θέμις, εὐχομένωι τεκμήρατε πᾶσαν ἀοιδήν.}$$

The phrase ἧι θέμις in this context is idiomatic, but it seems to fore-

shadow the emphasis upon justice in connection with Zeus which is found in

other thematic passages in the poem.

Because Cicero's translation of Aratus' prooemium is not extant,

we must turn to Germanicus' translation for our first example of the re-

arrangement of Aratus' theme in Latin verse. In keeping with the affirm-

ation of aspects of Roman life, and, in particular, features of contempor-

ary Roman politics, we find in Germanicus' poem a a new theme appropriate

for the author and his age -- peace. Germanicus opens his poem not with

praise of Zeus but with the acclamation of a genitor who in this context

may be identified with the emperor Augustus (GPh 2-4):[31]

$$\text{. . . at nobis, genitor, tu maximus auctor;}$$
$$\text{te ueneror, tibi sacra fero doctique laboris}$$
$$\text{primitias. Probat ipse deum rectorque satorque.}$$

The same idea of veneration is present, but its object has changed to suit

the interest of a contemporary audience. Germanicus, furthermore, employs

several important keywords in his prooemium which serve to separate more no-

ticeably his own thematic emphasis from that of Aratus: quies, te praeside

(GPh 9) and pax tua (GPh 16).[32] Like Aratus, who concludes the prooemium

to his poem by identifying Zeus more closely with justice, Germanicus links

the general theme of peace more surely to the Augustan peace. His prooemium

thus becomes a hymn in praise of Augustan peace and Augustus himself.

Germanicus completely ignores Aratus' theme of Zeus in his trans-

lation, but Avienus translates the Greek Zeus into a Roman Jupiter with a

different character and he uses the description of the deity as a prelude

to the introduction of furor as the unifying idea for his poem. Avienus'

prooemium, approximately four times as long as the original prooemium of

Aratus, presents an eclectic portrait of Jupiter as the prime mover of the

universe, the source of light, life, heat, fire and the music of the spheres

(AvPh 5-9):[33]

>   . . . iste paterni
> principium motus, uis fulminis iste corusci,
> uita elementorum, mundi calor, aetheris ignis
> astrorumque uigor, perpes substantia lucis
> et numerus celsi modulaminis . . .

This portrayal, expressed almost as a litany to the god,[34] is quite differ-

ent from the original description of the Greek Zeus who appeared only as a

chief god among other gods. Furthermore, the presence of Zeus as an edu-

cating force in Aratus' prooemium is superseded in Avienus' translation by

the description of Jupiter as the actual creator of the universe (AvPh

21-26):

>   . . . hic chaos altum
> lumine perrupit, tenebrarum hic uincula primus
> soluit et ipse parens rerum fluitantia fixit.
> hic dispersa locis statuit primordia iustis,
> hic digestorum speciem dedit, iste colorem
> inposuit rebus . . .

This Jupiter is more powerful than the Zeus depicted in Aratus' poem.

Yet, in spite of the emphasis placed upon Jupiter in the pro-

oemium, Avienus does not carry the thematic idea of Jupiter throughout his entire poem. At the end of the prooemium, Avienus introduces the actual theme of furor, "madness or poetic inspiration" (AvPh 67-76):

> Me quoque nunc similis stimulat furor edere uersu
> tempora, cum duris uersare ligonibus arua
> conueniat, cum ueliuolo dare carbasa ponto
> et cum uiticomo crinem tondere Lyaeo.   70
> o mihi nota adyti iam numina Parnasei!
> o per multa operum mea semper cura camenae!
> iam placet in superum uisus sustollere caelum
> adque oculis reserare uiam per sidera. maior,
> maior agit mentem solito deus, ampla patescit
> Cirra mihi et totis se Helicon inspirat ab antris.

It is furor which goads Avienus on to write a poem using Aratus' work as a model.[35] This furor resembles Dionysiac frenzy, as we may infer from the mention of the god of wine in AvPh 70. The lengthy description of the magnificent Jupiter found in the first part of this Phaenomena serves to amplify, therefore, the overwhelming power of this "madness" which Avienus proclaims to be greater than even this deity.[36]

(b) Dikē-Virgo

Aratus extends the thematic emphasis on Zeus and justice to his narration of the tale of Dikē and the ages of mankind. In contrast to the prooemium, however, Aratus does not mention Zeus by name, only alluding to him as Dikē's father (εἴτε τευ ἄλλου, APh 99).[37] But while Aratus does not overtly announce the parentage, he describes Dikē's actions in such a way that she appears as a true daughter of the Zeus who was depicted in the prooemium. Both Dikē and Zeus manifest themselves in the work places of man, as Aratus notes for Dikē, ἠέ που εἰν ἀγορῆι ἢ εὐρυχόρωι ἐν ἀγυιῆι (APh 106), and for Zeus (APh 2-3):

> . . . μεσταὶ δὲ Διὸς πᾶσαι μὲν ἀγυιαί
> πᾶσαι δ' ἀνθρώπων ἀγοραί, . . .

But more important is their association with the concept of justice. Aratus only alludes to this characteristic of Zeus in the introduction to his poem (APh 18) but in the Dikē passage he notes that this daughter of Zeus is actually called Δίκη or "Justice" (APh 105) and that she is active in the administration of justice as a giver of just things (δώτειρα δικαίων, APh 113) and as one who urges fair judgments upon the elders (δημότερας...
θέμιστας, APh 107).[38] The two portraits of Zeus and Dikē are similar, moreover, because they present the deities as actively involved in the welfare of men. Zeus is a teacher (APh 7-9) and Dikē tries to reform the wicked men of the Silver Age by means of a forceful, chastising speech (APh 123-126):

> "οἵην χρύσειοι πατέρες γενεὴν ἐλίποντο
> χειροτέρην. ὑμεῖς δὲ κακώτερα τεξείεσθε
> καὶ δή που πόλεμοι, καὶ δή που ἀνάρσιον αἷμα
> ἔσσεται ἀνθρώποισι, κακὸν δ' ἐπικείσεται ἄλγος".

She is forced to leave the earth "loathing" (μισήσασα, APh 133) human beings, to "stamp out" (νάσσατο, APh 134) a place for herself in the heavens.

Cicero's translation of Aratus' account of Dikē is fragmentary and unrevealing, but the active involvement of Aratus' Dikē may be contrasted with Germanicus' depiction of the goddess in a manner which supports his own thematic emphasis on peace. The goddess is presented as peace-loving almost to the point of passivity. When she can endure the degenerating ways of man no longer, she only chastises them as she sadly meets them in her travels (GPh 125-130):

> Tantum, cum trepidum uulgus coetusque notauit,
> increpat: "O patrum suboles oblita priorum,
> degeneres semper semperque habitura minoris,
> quid me, cuius abit usus, per uota uocatis?
> Quaerenda est sedes nobis noua, saecula uestra
> artibus indomitis tradam scelerique cruento".

In place of the forceful harangue employed by Dikē in Aratus' poem is a

lamentation in which Virgo invokes guilt in her listeners when she threat-
ens to leave the earth.[39] Germanicus, therefore, has attempted to portray
Virgo as a more placid goddess.

This rearrangement of Aratus' theme in the translation is
also supported by the presence of important keywords designating peace. The
word pacatus is used in reference to the Golden Age (GPh 103): Aurea pacati
regeres cum saecula mundi; placatus also describes the peaceful nature of the
land during this time (GPh 117): . . . fructusque dabat placata colono; and
placidissimus is used to portray the goddess herself, placidissima Virgo
(GPh 104). This association of the goddess of justice (iustissima Virgo in
GPh 137) with peace (placissima Virgo in GPh 104) further suggests the asso-
ciation of Augustus with his legal reforms and with the peace which he estab-
lished for the Roman world.[40] Thus Germanicus is consistent in emphasizing
both peace in general and, more specifically, the Augustan peace which had
great personal relevance for himself, as a member of the Augustan family, and
for the Roman audience which enjoyed its benefits.

Avienus also conveys the theme of furor in his translation of
Aratus' discussion of the goddess Dikē and the ages of man. In Virgo's
speech, which is twice as long as the corresponding speech in Aratus' poem,
Avienus portrays Virgo as a weeping, pathetic figure (lacrimis obortis, AvPh
326) who, in her tearful state, is used to remind the reader of the general
theme of furor (AvPh 326-334):

> "parcite uile genus!" lacrimis aiebat obortis,
> "causa querellarum uestrum est scelus! aurea quondam
> iudice me uestri uixerunt saecla parentes.
> degener in uobis animus, sollertia uobis
> peruigil, arte noua uitam traducere mos est.
> omne aeuum studiis excuditis. hinc quoque rursum,
> pro pudor adque dolor! nascetur uilior aetas
> et lacerata genas ibit Bellona per urbes
> saucia, ut infidas agitent certamina mentis".

Man's crimes are due to frenzy of the mind: degener animus (AvPh 329),

infidas mentis (AvPh 334). And man's degenerating ways will only lead to

war, which is personified by the horrific goddess of war, Bellona.[41] Vir-

go's dire predictions see their fruition in the Bronze Age when furor un-

leashes its full destructive force (AvPh 340-347):

> . . . . fraus ilicet et furor ardens
> adque cruentus amor chalybis segnisque libido
> et malesuada lucri rabies subit, omnia terror
> degener ac maestae facies formidinis inplet.
> secreti inmodicus uada gurgitis ultima uersat
> Tiphys, Agenoreo color hinc mentirier ostro
> incipit Assyriumque bibunt noua uellera fucum,
> ebria ut extremo splendescat lana ueneno.

Furor ardens is strengthened by the images found in the words cruentus amor

chalybis ("the bloody love of weapons"), segnis libido ("languid sensuality"),

lucri rabies ("frenzy for gain"), terror degener ("base fear"), and maestae

facies formidinis ("the shape of gloomy terror"). Even the sheep's wool can

be said to be in frenzy, intoxicated as it is with the exotic scarlet color

with which it has been dyed: Assyriumque bibunt noua uellera fucum (AvPh

346) and ebria lana ueneno (AvPh 347).[42] These manifestations of furor

force Virgo to finally abandon the earth, but she has not escaped the in-

fectious influence of the frenzy all around her (AvPh 348-349):

> sic iusta in populos mox uirginis inculpatae
> exarsere odia . . .

Just hatred "burned" (exarsere) within in much the same way as furor "burns"

(ardens) within mortals and wreaks its havoc upon them.

(c) The Pleiades and the Nameless Stars under Lepus

Aratus continues the thematic expression of his poem in his pre-

sentation of the Pleiades. He mentions Zeus twice in the passage, once by

indirect reference to the fact that no star has ever disappeared from the

sky (APh 259): οὐ μέν πως ἀπόλωλεν ἀπευθὴς ἐκ Διὸς ἀστήρ. In this con-
text, ἐκ Διὸς is usually translated "from the sky",[43] but its presence in
a thematic passage reinforces and reminds us of the theme of Zeus just as
ἥι θέμις, which appears in the prooemium (APh 18), alludes to the justice
of Zeus. In a second reference to the god, Aratus claims that Zeus him-
self has placed the Pleiades in the sky to mark the beginnings of summer,
winter and the plowing season (APh 265-267):

> ἦρι καὶ ἑσπέριαι (Ζεὺς δ' αἴτιος) εἰλίσσονται,
> ὅς σφισι καὶ θέρεος καὶ χείματος ἀρχομένοιο
> σημαίνειν ἐκέλευσεν ἐπερχομένου τ' ἀρότοιο.

Once again through the use of the word αἴτιος, Aratus stresses the active
power and involvement of Zeus. And the emphasis on agriculture in these
verses, furthermore, resembles the passage in the prooemium where Zeus is
said to have placed the constellations in the sky to serve as guides for
man's agricultural endeavors (APh 10-14) and the Dikē passage in which men
of the Golden Age are said to derive their living from oxen and the plow
(APh 112).

A similar use of thematic motifs is also evident in Aratus' dis-
cussion of the nameless stars which wheel beneath the constellation Lepus.[44]
Zeus is not mentioned by name in these verses but certain similarities of
subject matter link the passage with earlier presentations of the theme of
the poem. Aratus' comment (APh 382) that no star now appears unexpectedly
in the sky (... καὶ οὐκέτι νῦν ὑπὸ θαύματι τελλέται ἀστήρ) has a direct par-
allel (in APh 259) in the previously mentioned passage from the description of
the Pleiades. In addition, the use of the word θαύματι serves to connect
the passage directly with the presentation of Zeus in the prooemium, where
he is called a μέγα θαῦμα ("great marvel", APh 15). By means of such phrases

Aratus unifies these thematic passages and reminds the reader of the theme of Zeus which was first introduced in the prooemium to the poem.

Cicero's translation of Aratus' description of the Pleiades (the first thematic passage from his poem which is extant) reveals a new theme, the theme of rationalism and skepticism. Cicero omits both the allusion to Zeus found in the words ἐκ Διὸς (APh 259) and the direct reference to the god as the reason for the Pleiades' helpful existence in the heavens (APh 265-267). Instead, for the first allusion to Zeus he comments in a rather precise manner that although seven of the sisters are named by the poets of old, only six are visible in the sky (CPh 29-33):

> Hae septem uulgo perhibentur more uetusto
> stellae, cernuntur uero sex undique paruae.
> At non interiisse putari conuenit unam,
> sed frustra, temere a uulgo, ratione sine ulla
> septem dicier, ut ueteres statuere poetae,

Aratus in his description had noted the discrepancy but accepted the wisdom of Zeus in the matter. Cicero, in contrast, demonstrates a skeptical attitude towards the subject. The number seven associated with the Pleiades is due to common error (sed frustra temere a uulgo, CPh 32), illogical deduction (ratione sine ulla, CPh 32) and the dictates of poets not a god (ut ueteres statuere poetae, CPh 33). Cicero expresses a similar rationalism in his translation of Aratus' passage on the stars under Lepus (CPh 160-163):

> Nam quae sideribus claris natura poliuit
> et uario pinxit distinguens lumine formas,
> haec ille astrorum custos ratione notauit
> signaque dignauit caelestia nomine uero;

Cicero employs the important keywords natura[45] and ratio and thereby emphasizes the creative power of nature and the reasoning of man. This skeptical attitude suggests Cicero's own personal disbelief in the traditional

gods which he may have derived from his early study under the Epicureans.[46]

Rationalism such as Cicero's seems to have taken greater hold on the educated Roman mind at this time with the collapse of traditional religion, its abuse at the hands of politicians and the growing influence of competing religious ideas from the East. Cicero's own skepticism, therefore, may be attributed to his personal interest and to the leading ideas of his era which produced, in Lucretius' De Rerum Natura, the greatest poetic expression of rationalism and skepticism.

The corresponding passage from Germanicus' translation similarly repeats phrases from the earlier thematic passages and further develops the theme of peace.[47] The word "peace" is not itself mentioned in the description of the Pleiades, but there are references to agriculture and navigation (GPh 268-269):

> cum primum agricolam uernus tepor admonet agri
> et cum surgit hiems portu fugienda peritis.

Related phrases appear in the prooemium (GPh 9-10; 13-14) and we may indirectly, therefore, extend Germanicus' praise of the Augustan peace from the prooemium to this later passage. A certain reference to Augustus however, is found in the information, unsupported in Aratus' poem, which Germanicus provides for Atlas, the father of the Pleiades (GPh 264-265):

> caelifero genitae (si uere sustinet Atlas
> regna Iouis superosque atque ipso pondere gaudet).

This picture of Atlas carrying the heavens on his head bears close resemblance to a similar portrait found in Vergil's Aeneid 6.791-798:

> hic vir, hic est, tibi quem promitti saepius audis,
> Augustus Caesar, diui genus, aurea condet
> saecula qui rursus Latio regnata per arua
> Saturno quondam, super et Garamantas et Indos
> proferet imperium; iacet extra sidera tellus,
> extra anni solisque uias, ubi caelifer Atlas
> axem umero torquet stellis ardentibus aptum.

Vergil's description of Atlas is found in a prophecy of the future reign
of Augustus Caesar himself, who is called diui genus (compare GPh 4: Pro-
bat ipse deum rectorque satorque) and the founder of the Golden Age (com-
pare GPh 103: Aurea pacati regeres cum saecula mundi). In the context of
a thematic passage in his own poem, Germanicus is able, by means of adapting
Vergil's lines, to enrich his emphasis upon the theme of Augustan peace.

Like Germanicus, Avienus alludes to his theme of frenzy without
actually mentioning the word furor in his description of the Pleiades. Af-
ter listing the names of the seven sisters, Avienus discusses the possibi-
lity that Electra is absent because she weeps for the destruction of Troy
(AvPh 590-594):

> . . . sed sede carere sororum
> adque os discretim procul edere, detestatam
> germanoque choro subolis lacrimare ruinas
> diffusamque comas cerni crinisque soluti
> monstrari effigiem . . . .

Her very appearance manifests frenzy (diffusamque comas and crinisque solu-
ti). But more striking evidence of this frenzy is found in the sympathetic
appearance of blood-red comets (AvPh 594-597):

> . . . diros hos fama cometas
> conmemorat tristi procul istac surgere forma,
> uultum ardere diu, perfundere crinibus aethram,
> sanguine suppingi rutiloque rubere cruore.

In their color, these comets reflect the gore and blood of the Trojan War
(sanguine . . . rutiloque rubere cruore, AvPh 597).[48] And they burn (ardere,
AvPh 596) with frenzy in the same way Virgo burned with hatred (exarsere,
AvPh 349) at the furor ardens (AvPh 340) which had come to infest the affairs
of mankind.

(d) Capricorn and Ara

Shortly after the discussion of the Pleiades, Aratus presents a

brief but vivid description of the horrors which plague sailors around the
time of the winter solstice (APh 293-299):

> . . . τότε δὲ κρύος ἐκ Διός ἐστι,
> ναύτηι μαλκιόωντι κακώτερον. ἀλλὰ καὶ ἔμπης
> ἤδη πάντ' ἐνιαυτὸν ὑπὸ στείρηισι θάλασσα
> πορφύρει· ἴκελοι δὲ κολυμβίσιν αἰθυίηισιν
> πολλάκις ἐκ νηῶν πέλαγος περιπαπταίνοντες
> ἥμεθ ἐπ' αἰγιαλοὺς τετραμμένοι, οἳ δ' ἔτι πόρσω
> κλύζονται· ὀλίγον δὲ διὰ ξύλον Ἄιδ' ἐρύκει.

The phrase ἐκ Διός, also used in the previous discussion of the Pleiades,
again suggests the presence of Zeus which is the theme of the poem.[49] The
reference to the sea which follows may be compared to Aratus' assertion in
the prooemium that the sea and harbors are filled with the power of Zeus
(APh 3-4). The dangers of seafaring are also expressed in the passage which
presents the constellation Ara. Here the theme is directly alluded to with
the mention of Zeus by name (APh 422-429):

> . . . εἰ δέ κε νηΐ·
> ὑψόθεν ἐμπλήξηι δεινὴ ἀνέμοιο θύελλα
> αὔτως ἀπρόφατος, τὰ δὲ λαίφεα πάντα ταράξηι,
> ἄλλοτε μὲν καὶ πάμπαν ὑπόβρυχα ναυτίλλονται,
> ἄλλοτε δ', αἴ κε Διὸς παρανισσομένοιο τύχωσιν
> εὐχόμενοι, βορέω δὲ παραστρέψηι ἀνέμου ἴς,
> πολλὰ μάλ' ὀτλήσαντες ὅμως πάλιν ἐσκέψαντο
> ἀλλήλους ἐπὶ νηΐ . . .

If sailors pray to Zeus and win his aid, Aratus tells us, they may be for-
tunate and escape the storm. This is the same Zeus whom Aratus presented in
the prooemium (APh 3-4) and the same Zeus who seems to have been responsi-
ble for the dangers of winter storms inflicted upon sailors at the time of
the winter solstice (APh 293-299). Yet unlike sailors in the earlier ac-
count, who had no recourse to the god, these sailors, through the interven-
tion of Night and Zeus, may count themselves the beneficiaries of the kind-
ness of the Zeus the father who was identified in the prooemium (APh 5, 15).

In keeping with his theme of skepticism, Cicero does not translate

Aratus' allusion to Zeus (APh 293) found in the description of Capricorn,
and instead, he comments in a straightforward fashion upon the wind and
cold (CPh 67-68):

> at ualidis aequor pulsabit uiribus Auster,
> tum fixum tremulo quatietur frigore corpus.

And in place of the two striking images presented in the original of sail-
ors timidly looking at the shore like diving birds and staving off death
by means of a thin plank of wood, images in fact of men at the mercy of
Zeus, Cicero comments on the courage of the sailors who fear neither wind
and rain nor the power of the constellations (CPh 70-71):

> nec ui signorum cedunt neque flamina uitant,
> nec metuunt canos minitanti murmore fluctus.

Through the words nec ui signorum cedunt, Cicero disavows the role of the
constellations, which, according to Aratus (APh 10-13, 265-267) had
once been established by Zeus as guides for mankind. Cicero rejects Zeus,
therefore, as an explanation for the benefits enjoyed by mankind. Similar-
ly, in his own discussion of the constellation Ara, Cicero avoids any men-
tion of the possibility of divine intervention while continuing his theme
of skepticism (CPh 198-202):

> sin grauis inciderit uehementi flamine uentus,
> perfringet celsos defixo robore malos,
> ut res nulla feras possit mulcere procellas,
> ni parte ex Aquilonis opacam pellere nubem
> coeperit et subitis auris diduxerit Ara.

Cicero translates the basic content of the corresponding verses from Ara-
tus' poem, but emphasizes in contrast that the winds and clouds will not
dissipate until Ara halts their destructive forces.[50] The sailors, there-
fore, need only wait for nature to take control. Appeal to Zeus is unnec-
essary.[51]

Germanicus' translation of the Capricorn passage, in comparison,
expresses the theme of his work by means of indirect reference to the Augus-
tan peace. Several similarities in phrasing, for example, relate this
passage to the prooemium. Germanicus alluded, in the prooemium, to Augus-
tus' own association with the sign of Capricorn (diuersasque secat metas
gelidi Capricorni, GPh 7), chosen by him as his natal sign. The simi-
larly phrased line GPh 289 (cum sol ambierit metas gelidi Capricorni)[52] re-
calls this previous mention of Augustus' close connection with the sign
of Capricorn. A subtle reference, moreover, to the Augustan peace is found
in GPh 296-297:

> nulla dies oritur, quae iam uacua aequora cernat
> puppibus, et semper tumidis ratis innatat undis.

The sentiment of this passage may be compared with that expressed in the
initial exposition of the theme in the prooemium: si non tanta quies, te
praeside, puppibus aequor/ . . . daret . . . (GPh 9-10). The very ability
of sailors to set out on winter seas is due, therefore, to the establish-
ment of peace by Augustus after the naval battle of Actium. Another allu-
sion to the Augustan peace is found in Germanicus' discussion of the con-
stellation Ara. If Ara is shining in the sky, sailors should fear that
peace will be swept from the sea (GPh 403-404):[53]

> nubibus obductis, illo splendent, timeto,
> ne pacem pelagi soluat uiolentior auster.

The use of the word pax in connection with Ara is appropriate since in myth-
ology Ara is the altar upon which Jupiter swore before engaging the Titans
in battle. Before this war and the eventual establishment of peace, Jupiter
placed this constellation in the heavens.[54] The employment of a keyword for
Augustan peace, pax, in connection with Jupiter suggests, perhaps, the scale

of the Roman civil war which preceded the Augustan era. The connection of

Augustus with Jupiter and Augustus with peace was first noted in Germani-

cus' prooemium; Jupiter himself approved the dedication of Germanicus' poem

to Augustus (GPh 4), and pax tua (GPh 16) directly signified the Augustan

peace.

In his corresponding discussion of the perils of seafaring atten-

dant upon the entry of the sun into Capricorn, Avienus also uses expressions

which recall previous thematic passages. The word inmemor in AvPh 664-665:

> tum freta fluctiuagis, tamen isti saepe malorum
> inmemores agitant totos in fluctibus annos;

may be compared with the only other use of the word in the poem (AvPh 47):

mundanique ortus mens inmemor omnia sensim. The picture of men gazing at

the shore (AvPh 667-668): . . . quaerunt oculis distantia longe/litora . . .

resembles Avienus' reference to the observation of the heavens in the prooe-

mium (AvPh 74): adque oculis reserare uiam per sidera. But more impor-

tantly, Avienus ends his description of the sailors with a reference to

furor (AvPh 668): . . . et in pontum cogunt lucra semper hiantis. This

longing for profit was mentioned twice in the Virgo passage, in AvPh 342,

lucri rabies, and in AvPh 311-315:

> nulla fides undis, tumido commercia fluctu
> nulla petebantur neque longis nauita terris
> insinuare ratem susceperat, exul ut oris
> omnibus externas ueheret per inhospita gazas
> aequora et insano penderet saepe profundo.

In the Golden Age, where frenzy was not to be found, no one sailed the seas

in search of profit or treasures (externas gazas). Nor did anyone subject

himself to the unpredictable nature of the raging sea (insano profundo). The

lust for profit (commercia, gaza) is, therefore, a manifestation of furor

which may also afflict an inanimate object such as the sea, a partner in the

search for gain.[55]

(e) <u>Orion and Cassiopeia</u>

Aratus gives a thematic emphasis to the tales of Orion and Cassiopeia in his discussion of the constellations which rise and set with the sign of Scorpio. The two principal actors in the first story are the goddess Artemis and the hunter Orion, who, according to Aratus, laid hands upon Artemis' robe and thus brought about his own death.[56] Zeus is not mentioned by name in the story but several indirect references recall his important presence in the poem. Artemis, for example, is known as the daughter of Zeus and the poet invokes her goodwill (Ἄρτεμις ἱλήκοι, <u>APh</u> 637) in much the same way as he hailed her father (χαῖρε, πάτερ, μέγα θαῦμα, <u>APh</u> 15) and Zeus' other daughter, Dikē (εὔκηλος φορέοιτο, <u>APh</u> 100). Both goddesses, moreover, show their righteous anger against mortals, Dikē by leaving mankind to its corrupt ways, and Artemis, by sending the scorpion to kill the impious Orion.

Further reference to the idea of justice which was introduced at the end of the prooemium follows in the brief description of Cepheus which serves to link the story of Orion and Cassiopeia (<u>APh</u> 649-652):

> . . . ὁ δὲ ζώνηι τότε Κηφεύς
> γαῖαν ἐπιξύει, τὰ μὲν ἐς κεφαλὴν μάλα πάντα
> βάπτων ὠκεανοῖο, τὰ δ' οὐ θέμις, ἀλλὰ τά γ' αὐτόν
> Ἄρκτοι κωλύουσι πόδας καὶ γοῦνα καὶ ἰξύν.

The words τὰ δ' οὐ θέμις (<u>APh</u> 651), used idiomatically in this context, remind the reader of a similar idiomatic usage in the prooemium (ἧι θέμις, <u>APh</u> 18). In addition, this use of θέμις may be compared with the employment of θέμιστας (<u>APh</u> 107) from the discussion of Dikē and the ages of man. The word θέμις, by means of this connection with Zeus and justice, however, is

more important as a reminder of the punishment of the hunter Orion, which

has already been described, and as a foreshadowing of the just treatment of

Cassiopeia which follows.

The hapless figure of Cassiopeia has been doomed to revolve in the

heavens, forever upside-down like a diver, because she insulted the Nereids,

Doris and Panopē (APh 657-658):

$$\ldots \text{ἐπεὶ οὐκ ἄρ᾽ ἔμελλεν ἐκείνη}$$
$$\text{Δωρίδι καὶ Πανόπηι μεγάλων ἄτερ ἰσώσασθαι.}$$

Cassiopeia thought herself capable of rivalling these goddesses in beauty

and as a punishment she was placed in the sky (κατὰ κόσμον, APh 654) while

her daughter Andromeda was chained to a rock to be a victim of Cetus, the

horrible sea monster. But tragic as the fortunes of the two may seem, they

are just retribution (ἣ θέμις) for such severe affront to immortal dignity.

Cicero also makes use of this important descriptive passage to ex-

press his own individual theme. Consistent with previous thematic passages,

Cicero avoids any remarks which may be construed as homage to deities. He

omits Aratus' invocation to Artemis and plunges quickly into the tale of

Diana's violation at the hands of Orion (CPh 420-425):[57]

> Vir quondam Orion manibus uiolasse Dianam
> dicitur, excelsis errans in collibus amens
> quos tenet Aegaeo defixa in gurgite Chius
> B[r]acchica quam uiridi conuestit tegmine uitis.
> Ille feras uaecors amenti corde necabat,
> Oenopionis auens epulas ornare nitentis.

The tale is simply told, and the word dicitur, found at the beginning of the

line, emphasizes by its position that Cicero considered Aratus' tale a fan-

tastic one. More significantly, however, Cicero ignores the emphasis on di-

vine justice present in the Greek passage and instead stresses that the ac-

tions of Orion can be ascribed to reasonable human causes. Cicero adds to

the original discussion that the island of Chios was known for its viti-
culture (CPh 423), and from this subtle reference we may presume that Orion
was inebriated when he offended the goddess. Cicero also adds that Orion
is amens ("mad", CPh 421) and uaecors amenti corde ("insane because of his
maddened heart", CPh 424).[58] Rational explanation, therefore, overshadows
the manifestation of divine wrath found in the original verses.

Cicero omits Aratus' reference to θέμις in the intervening descrip-
tion of the constellation Cepheus and moves on to tell of the plight of Cas-
siopeia. Her position in the heavens is depicted less vividly in compari-
son with Aratus' description (CPh 443-445):

> Cassiepia, neque ex caelo depulsa decore
> fertur: nam uero contingens uertice primum
> terras, post umeris euersa sede refertur.

She is, in short, head over heels in the sky. Cicero, furthermore, quali-
fies his retelling of her punishment by using, independently of his source,
a disclaimer regarding its truth (CPh 446-447):

> Hanc illi tribuunt poenam Nereides almae,
> cum quibus, ut perhibent, ausa est contendere forma.

The words ut perhibent demonstrate Cicero's skepticism toward the entire
tale and the phrase almae Nereides is ironic almost to the point of sarcasm
since toward Cassiopeia these goddesses were far from "kind". The drama-
tic lesson about justice found in Aratus' discussion of Cassiopeia and Orion
is therefore turned into a skeptical account of the intervention of divine
beings in the affairs of men.

Germanicus changes the thematic emphasis found in Aratus' descrip-
tion of these two mortals to suit his own particular theme.[59] He adds words
which directly refer to the theme of peace: placatus in placata Latonia
uirgo (GPh 646) and pacatus in pacatamque Chion dono dabat Oenopioni (GPh

652), and includes a reference to Augustus in the words Phoebi germana

(GPh 653) which recall, as noted in the previous section of this chapter,

the Ludi Saeculares, the great celebration of Augustan peace. He also fails

to emphasize the forceful nature of Greek Artemis in his own portrayal of

her Roman counterpart, Diana (GPh 653-656):

> Haud patiens sed enim Phoebi germana repente
> numinis ultorem media tellure reuulsa
> Scorpion ingenti maiorem contulit hostem.
> Parcite, mortales, numquam leuis ira deorum.

Aratus had described Artemis as bringing forth the scorpion herself with the

dramatic verb, ἀναρρήξασα (APh 642). But Germanicus uses an ablative ab-

solute, media tellure reuulsa, to depict the opened hills, thereby circum-

scribing the powerful action of Aratus' goddess. Diana's more passive char-

acter therefore resembles that of Germanicus' Virgo. In addition, Germani-

cus avoids a statement on the just retribution secured by Artemis in Ara-

tus' poem (APh 644) and gives in its place some abrupt advice: Parcite

mortales, numquam leuis ira deorum. By means of this verse, Germanicus

leads the reader to the consideration of other gods whose anger can yield

dire consequences for mortals.

The poet tells us that Cassiopeia's sin was to vy with Doris and

Panopē in beauty and to watch their dances on the shore (GPh 664-666):

> . . . certauerat olim
> qua senis aequorei natis, cum litore Cancri
> Doridos et Panopes spectasset stulta choreas.

Germanicus has added a new element to Cassiopeia's crime: to see what one

should not see is a punishable impiety. By means of this unexpected inform-

ation, the reader cannot help but recall the carmen et error of Germanicus'

friend Ovid who was exiled from Rome, as he argues (Tristia 2.207-208), be-

cause he was an unwilling witness to . . . something. This subtle refer-
ence to Ovid's punishment, therefore, is also a reference to Augustus who
exiled the poet in A.D. 8.[60] In real terms, Augustus the god, whose dei-
fication was described in GPh 558-560, exercised unchallenged power over
the lives of his subjects, power greater even than that held by the myth-
ical Nereids over Cassiopeia.

Avienus, like his predecessors, renders the tales of Orion and Cas-
siopeia and adds an individualized thematic emphasis on *furor*. Orion's ac-
tions are not due to drunkenness, as Cicero implies, but to *furor* itself
(AvPh 1174-1178):

> . . . caecus mos mentis acerbae
> inmodicusque furor sceleris penetrauerat oestro
> inpia corda uiri. caluerunt dira medullis
> protinus in mediis incendia, plurimus ardor
> pectore flagrauit . . . .

In these verses, Avienus stresses that the events which take place are the
result of something which "burns within" Orion:[61] inmodicus furor . . .
penetrauerat . . . /inpia corda, "an unrestrained frenzy had pierced his
ungodly heart", caluerunt dira medullis/ . . . in mediis incendia, "dreadful
fires glowed in his inmost marrow" and ardor/pectore flagrauit, "fire burn-
ed in his breast". This ardor may be compared with previous expressions of
internal frenzy discussed for Virgo, exarsere (AvPh 349); for the wicked
ways of mankind, furor ardens (AvPh 340); for the comets associated with
Electra, uultum ardere (AvPh 596);[62] and with the more noble expression of
furor as poetic inspiration from within described in the prooemium (AvPh
67, 70, 75-76). Avienus also uses the word *furor* a second time to comment on
the punishment of Orion (AvPh 1189-1191):

> . . . ista furori
> praemia debentur: sunt haec conmercia laesis
> semper numinibus. . . .

According to Avienus, death was the reward for Orion's _furor_, but ironically, it is also the profit (_conmercia_) of deities whose dignity had been outraged. Such references to profit and reward draw the reader's attention back to other thematic passages in which the love of gain was connected with _furor_, to _lucri rabies_ (AvPh 342), _lucra semper hiantis_ (AvPh 668) and _gazas_ (AvPh 314). _Furor_ displayed as unchanneled frenzy only bodes ill for mortals. Avienus continues this emphasis on _furor_ in his description of the punishment of Cassiopeia by the Nereids (AvPh 1206-1208):

> . . . quatit ira furorque
> Doridos et Panopes post fata nouissima matrem
> ac memor has poenas dolor exigit. . . .

Anger and _furor_ goad the goddesses on to punish Cassiopeia. _Furor_, therefore, may be regarded as a possession of the gods; its misuse in mortal hands as unbridled frenzy which burns from within, provokes only punishment from the very gods who make the usage possible.

(f) The Conclusion

A final affirmation of the theme of the Greek poem is found in the concluding verses of the _Phaenomena_ section where Aratus employs several phrases which call to mind previous thematic passages (APh 728-732):

> ἤδη καὶ Ποταμοῦ πρώτην ἁλὸς ἐξανιοῦσαν
> καμπὴν ἐν καθαρῶι πελάγει σκέψαιτό κε ναύτης
> αὐτὸν ἐπ᾽Ὠρίωνα μένων, εἴ οἵ ποθι σῆμα
> ἢ νυκτὸς μέτρων ἠὲ πλόου ἀγγείλειεν.
> πάντη γὰρ τά γε πολλὰ θεοὶ ἄνδρεσσι λέγουσιν.

The reference to the sea and ships (APh 728-729) recalls the description of the perils of the open sea depicted in the discussions of Capricorn and Ara as well as the prooemium where Zeus was heralded as manifest in both harbors and the sea (APh 3-4). The mention of Orion (APh 730), in addition, recalls the recently narrated tale of Orion and the justice displayed in his punish-

ment. But the final line serves to return the reader's attention to loftier conceptions of the gods (θεοί), and of Zeus especially, who was praised in the prooemium for the numerous benefits which he provided for mankind.

The corresponding passage from Cicero's translation is missing, but Germanicus' concluding lines also convey the theme of his poem (GPh 719-725):

> Et cum se genibus demisit pars Ophiuchi,
> signum erit Oceano Geminos remeare relicto.
> Totaque iam Pristis lucebunt squamea terga;
> Eridani et primos deprendat nauita fontes,
> caelum conspiciens, dum claro se mouet ortu
> Orion; habet ille notas, quae tempora noctis
> significent, uentosue truces fidamue quietem.

In the final verse, the words uentosue truces fidamue quietem draw the reader immediately back to the prooemium where Germanicus had written (GPh 9): si non tanta quies, te praeside puppibus aequor, and to the theme of the peace established by Augustus for the benefit of the Roman world. Avienus similarly closes with a thematic statement consistent with earlier passages in his poem (AvPh 1320-1325):

> credo, ni desit magnorum congrua cura,
> prompta uia est ipso cognoscere talia semper
> praeceptore Ioue et caelo tibi signa magistro
> omnia ducentur. monet alta Iuppiter aethra
> singula nos, facilis ueram dedit arbiter artem,
> ne tempestatum primordia caeca laterent.

The use of the word caeca in the final line resembles the earlier description of Orion's furor (AvPh 1174): . . . caecus mos mentis acerbae. Avienus, therefore, concludes with a subtle allusion to his theme that furor, if employed incorrectly, makes man blind to the consequences of his actions. But if used well, furor makes a poet blind to all else but his craft which, as noted in the prooemium, is the force which has driven Avienus to the conclusion of his poem.[63]

NOTES

[1]The prose translation, *Aratus Latinus*, has not been included in this discussion of the emergence of a Roman *Phaenomena* because, by its very nature as a *uerbum de uerbo* translation, it allows for little or no creative expansion.

[2]For references to Roman religion in Cicero's translation see *CPr* 4.4 (*carmen*), *CPh* 129 (Neptune), *CPh* 305 (*numen*). For similar references in Avienus' translation see *AvPh* 1, 582, 626, 717, 927, *AvPr* 1703, 1741 (*carmen*), *AvPh* 71, 371 (*numen*), *AvPh* 1171 (Diana), *AvPr* 1855 (Lares).

[3]For this phrase compare also *Aeneid* 1.293, 507-508. Compare also the similar legal term, *iurisdictio*, the power which was given to magistrates with *imperium* in A. Berger, *Encyclopedic Dictionary of Roman Law* (Philadelphia: American Philosophical Society, 1953), pp. 523-524.

[4]J. Lindsay, *Origins of Astrology* (London: Frederick Muller, 1971), p. 241. For other uses of the word *metae* in Germanicus' translation, see *GPh* 289, 397, 481, 484. Compare also the uses of the word in Avienus' translation (*AvPh* 168, 988).

[5]For other uses of the word *numen* in Germanicus' translation see *GPh* 16, 102, 165, 351, 558, 563 and *GFr* III.23, IV.36. For a discussion of the significance of the word in ancient Roman religion see K. Latte, *Römische Religionsgeschichte* (Munich: C.H. Beck'sche Verlagsbuchhandlung, 1960), p. 57.

[6]Compare, for example, Cato's *De Agricultura* 139, a prayer at the thinning of a grove where repetition and alliteration are present: *si deus, si dea*; *porco piaculo*; *preces precor*. The repetitions in Virgo's speech may be attributed to rhetoric, but in view of the great emphasis on religion in Germanicus' poem, it seems more logical to attribute their presence to this aspect of Roman life. P. Steinmetz, "Germanicus, der römische Arat", *Hermes*, 94 (1966), pp. 462-463 comments on the resemblance of the entire Virgo passage to a hymn.

[7]Compare the use of the related words *pius* (*GPh* 421, 547, 621, 637) and *pietas* (*GPh* 556). The religious word *terminus* (*GPh* 118) can also be added to this list. For the festival of the Terminalia compare Ovid, *Fasti* 2.641-684; for the story of the temple of Terminus which would not be moved see Livy, *Ab Urbe Condita* 1.55.3-5.

[8]See also *GPh* 348 for another use of *uota*. For the ritual of *deuotio* see Livy, *Ab Urbe Condita* 8.9.1-11.1 (Decius).

[9]Steinmetz, p. 463 states that the religious reforms of Augustus influenced Germanicus' treatment of the Dikē passage, but does not elaborate upon this statement.

[10] See Res Gestae 19 for a discussion of these reforms.

[11] Augustus states in Res Gestae 22 that he celebrated the Ludi Saeculares on behalf of the college of the Quindecimviri of which he was magister.

[12] Compare also GPh 129 (saecula uestra) and GPh 436 (longo ... aeuo). For similar references to the Augustan Golden Age, see Aeneid 6. 792-793 and Eclogue 4.17. H.C. Baldry, "Who Invented the Golden Age?", CQ, 2 (1952), p. 90 states that after the Augustan period, aurea saecula became a commonplace. Its usage in AvPh 294 lacks the immediacy of a connection with Augustus, which is found for the words in Germanicus' translation.

[13] Augustus personally favored the god Apollo, whom Vergil portrayed as a helping force for Augustus at the battle of Actium (Aeneid 8.704). Augustus consecrated a temple on the Palatine to Apollo in 28 B.C. (Res Gestae 19). For an expression of the devotion to Apollo during the Augustan period, compare Tibullus, Carmen 2.5.

[14] For discordia used in the context of civil war, see also Cicero, Epistula ad Familiares 16.11.2. Compare also Livy, Ab Urbe Condita 2.24.1 and Aeneid 7.545.

[15] The poet Vergil was one of those evicted from his farm (Compare Eclogue 9.2-6). For a history of this event, see R. Syme, The Roman Revolution (London: Oxford University Press, 1939, repr. 1960), p. 350. D.B. Gain, The Aratus Ascribed to Germanicus Caesar (London: The Athlone Press, University of London, 1976), p. 86, n. 114 interprets this reference to priuata tellus simply as a contrast to mare, which is publicum. Compare G. Maurach, Germanicus und sein Arat (Heidelberg: Carl Winter, 1978), p. 66, n. 114 who follows Gain's interpretation. These views, however, hide the real political significance of the words.

[16] Augustus' interest in the land of Italy finds artistic expression on the Ara Pacis, for which see H. Riemann, "Pacis Ara Augustae", RE, XVIII.2, 2082-2107 and E. Simon, Ara Pacis Augustae (Tübingen: Verlag Ernst Wasmuth, 1967). In addition, Augustus' interest in the fertility of the land may be deduced by his choice of the name "Augustus". Since it was cognate with the verb augeo, "to increase", Augustus could solidify his connection with fertility and magnitude. Compare L.R. Taylor, "Livy and the Name Augustus", CR, 32 (1918), pp. 158-161. For a view of the land which resembles that of Germanicus, compare Vergil, Eclogue 4.39. The idea of the earth producing all fruit spontaneously, however, may be traced to Hesiod, Works and Days 117-118.

[17] G. Sieg, "De Cicerone Germanico Avieno Arati Interpretibus" (Dissertatio Inauguralis, Halle, 1886), p. 26 considers GPh 531-572 to be an interpolation. A. Breysig, ed., Germanici Caesaris Aratea cum Scholiis (Hildesheim: Georg Olms Verlagsbuchhandlung, 1867, repr. 1967) holds that GPh 531-569 belonged with the Fragments. J. Maybaum, "De Cicerone et Germanico Arati Interpretibus (Dissertatio Inauguralis, Rostoch,

1889), p. 19; W. Leuthold, "Die Übersetzung der Phaenomena durch Cicero und Germanicus" (Doctoral dissertation, Zurich, 1942), p. 49 and C. Santini, Il segno e la tradizione in Germanico scrittore (Rome: Cadmo editore, 1977), p. 19 believe that Germanicus is the author of the passage and that it belongs in this portion of the poem. Augustus was born on September 23, 63 B.C. when the sun was in the sign of Libra, but he placed himself under the sign of Capricorn. There has been some debate about Augustus' emphasis of Capricorn over Libra. A.E. Housman, "Manilius, Augustus, Tiberius, Capricornus and Libra", CQ, 7 (1913), p. 113 states that Capricorn's prominence is due to the presence of the moon in the sign of Capricorn at Augustus' birth. Lindsay, pp. 246-247 adds that Augustus may have chosen Capricorn as an official sign or that it was the sign under which he had been conceived. Augustus issued a coin with the sign of Capricorn on the reverse which may be dated to 19/15 B.C. For this see J.P.C. Kent, B. Overbeck, A.U. Stylow, Die Römische Münze (Munich: Hirmer Verlag, 1973), Tafel 37, no. 143.

[18]The Aratus Latinus makes no use of the earlier Latin verse translations. A few instances of similarity between this late translation and the earlier ones seem to be merely coincidental. Compare, for example, ALPh 198-199, . . . quem oportet/nocte circumspicere, quod statim uidetur, and GPh 201-202, . . . totam quam cernere nondum/obscura sub nocte licet. Compare also ALPh 233 (est quidem) with GPh 234 (est etiam) and AvPh 527 (est etiam); ALPh 326 (talis custos) with GPh 333 (talis ei custos) and AvPh 724 (talis . . . custos).

[19]Compare also similarities in:

CPh 101 and GPh 327   CPh 392 and GPh 622
CPh 387 and GPh 620

For a comparable list of similarities between the two translations see Sieg, p. 44.

[20]Other similarities in translation are evident in the poems of Avienus and Cicero:

CPh V and AvPh 103   CPh 132 and AvPh 760-761
CPh XXI and AvPh 363   CPh 203 and AvPh 874
CPh XXII.3 and AvPh 392   CPh 218 and AvPh 896
CPh 5-6 and AvPh 527   CPh 275 and AvPh 980-981
CPh 16-18 and AvPh 555-557   CPh 300 and AvPh 1018
CPh 50 and AvPh 637   CPh 341 and AvPh 1060
CPh 61 and AvPh 655   CPh 343 and AvPh 1063
CPh 91-92 and AvPh 700   CPh 364 and AvPh 1094
CPh 123 and AvPh 749   CPh 476 and AvPh 1264

For a comparable list, see K. Ihlemann, "De R. Festi Avieni in Vertendis Arateis Arte et Ratione" (Dissertatio Inauguralis, Göttingen, 1909, pp. 60-66).

[21]For other translation similarities between the poems of Avienus and Germanicus see:

GPh 6-8 and AvPh 54-60	GPh 323 and AvPh 701
GPh 9-10 and AvPh 41	GPh 331 and AvPh 723
GPh 13-14 and AvPh 68-69	GPh 333 and AvPh 724
GPh 18 and AvPh 85	GPh 343 and AvPh 747
GPh 19-20 and AvPh 119	GPh 356 and AvPh 775
GPh 22 and AvPh 94	GPh 377-378 and AvPh 812
GPh 39 and AvPh 121	GPh 393 and AvPh 845
GPh 53 and AvPh 144	GPh 418-419 and AvPh 885-887
GPh 56-57 and AvPh 153-155	GPh 459 and AvPh 951
GPh 61 and AvPh 164	GPh 464 and AvPh 973
GPh 62 and AvPh 167	GPh 476-480 and AvPh 972-975
GPh 66 and AvPh 174	GPh 494-495 and AvPh 990-991
GPh 78 and AvPh 230	GPh 589 and AvPh 1122
GPh 97 and AvPh 284	GPh 590 and AvPh 1080-1081
GPh 98 and AvPh 277	GPh 598 and AvPh 1094
GPh 105 and AvPh 279	GPh 607 and AvPh 1105-1106
GPh 109 and AvPh 305	GPh 615-616 and AvPh 1118
GPh 111 and AvPh 292	GPh 618 and AvPh 1121
GPh 120 and AvPh 318	GPh 626 and AvPh 1133
GPh 121 and AvPh 304	GPh 646 and AvPh 1171
GPh 127 and AvPh 329	GPh 652 and AvPh 1183
GPh 166-168 and AvPh 407-408	GPh 667 and AvPh 1211
GPh 263-265 and AvPh 573-575	GPh 701 and AvPh 1272

For a comparable list of similarities between the poems, see also Sieg, p. 44 and Ihlemann, pp. 66-75. Sieg, p. 44, n. 1 stresses that Avienus was trans-lating Aratus' poem, not Germanicus' work.

[22] Compare similar expressions in Lucretius, De Rerum Natura 1. 66-67; Ovid, Metamorphoses 1.85-86, 1.731; Manilius, Astronomica 1.13-15; Seneca, De Beneficiis 1.3.1. See also L. Delatte, "Caelum ipsum petimus stultitia . . . (Contribution à l'étude de l'ode I,3 d'Horace)", AC, 4 (1935), pp. 309-336.

[23] J. Soubiran, ed., Aviénus: Les Phénomènes d'Aratos (Paris: Les Belles Lettres, 1981), p. 127, n. 2 emends the word alnis to ulnis. The phrasing of AvPh 793 is then closer to GPh 366, but a dramatic reference to the metamorphosis is lost. For the tale of the Phaëthontides see Ovid, Metamorphoses 2. 346-366.

[24] Compare Aeneid 7.44-45. The passage which discusses the planets is the opening one for the second major portion of the description of the constellations (the paranatellonta). The similarity to Vergil's lines which open the second half of the Aeneid is obvious.

[25] For Germanicus' discussion of the planets, see the remaining frag-ments of the poem (GFr).

[26] Compare also CPh 132-133, GPh 347-349 and AvPh 759-762.

[27] There has been little discussion of the themes of the poems. Steinmetz, p. 476 notes only that Germanicus binds his work together through myths which provide (p. 479) a picture of world order.

[28] For the location of each of these corresponding passages in the poems see Appendix II. Aratus' description of the Milky Way (APh 469-479) also contains thematic emphasis, but since the translators do not express their own individual themes in the corresponding passages, we have omitted it from the following discussion.

[29] J. Martin, ed., *Arati Phaenomena* (Florence: La Nuova Italia Editrice, 1956), p. 3 (prélude) states that the verses of·the prooemium give the key to the entire poem. Compare M. Erren, *Die Phainomena des Aratos von Soloi* (Wiesbaden: Franz Steiner Verlag, 1967), pp. 9-31; the prooemium is divided into three parts: *das Ritual, die Aretalogie* and *Heroenpreis*. He considers (pp. 14-15) the prooemium to have been written as if for attendants at a symposium where Zeus and then the heroes would have been mentioned. APh 16 which contains the words προτέρη γενεή is therefore a key line in his theory. Compare also Martin, *Phaenomena* pp. 9-11·on these problematic words. Erren's book has received mixed reviews. F. Vian in a review, *REG*, 81 (1968), pp. 280-281 comments that the book is a useful and interesting contribution to Aratean studies, but J.F. Masselink, in *Mnemosyne*, 4th series, 23 (1970), p. 206 complains that the book suffers from a disturbing *Weitschweitigkeit*.

[30] For the connection of Zeus with the royal family of Macedonia see further Chapter I, n. 26.

[31] Compare Preface, n. 3.

[32] G. Maurach, *Germanicus und sein Arat* (Heidelberg: Carl Winter Universitätsverlag, 1978), p. 31, n. 16 concurs that the words *pax tua* refer specifically to the peace instituted by Augustus.

[33] On the eclectic nature of this passage, compare Soubiran, *Aviénus*, p. 45 and p. 94, n. 11. Soubiran, p. 51 comments that Avienus' prooemium is an abridgement of the history of the world in the guise of a hymn; it is not a ponderous accumulation of vague philosophical and religious formulas. It shares (pp. 43-44) many features with late Latin hymns.

[34] For a similar use of titles for a god, compare Seneca, *Consolatio Ad Helviam Matrem* 8.3. The Jupiter depicted in AvPh 21-26 bears some resemblance to the God of the book of *Genesis*. Sieg, p. 40 states that Avienus was probably not a Christian, but may have read books of scripture.

[35] Soubiran, *Aviénus* emends *furor* (AvPh 67) to *fauor* in his text. For his justification, see his "Notes critiques aux Aratea d'Aviénus", *Pallas*, 24 (1977), p. 84: "fauor y révèle l'orgueil du poète ⟨⟨élu⟩⟩ de Jupiter". This emendation, unfortunately, eliminates the important thematic emphasis which is conveyed by the word *furor* (AvPh 67).

[36] *Furor* is an important motif in Vergil's *Aeneid*. See, for example, *Aeneid* 4.101 and 7.386. Avienus may have borrowed the motif from

[28]For the location of each of these corresponding passages in the poems see Appendix II. Aratus' description of the Milky Way (APh 469-479) also contains thematic emphasis, but since the translators do not express their own individual themes in the corresponding passages, we have omitted it from the following discussion.

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[33]On the eclectic nature of this passage, compare Soubiran, Aviénus, p. 45 and p. 94, n. 11. Soubiran, p. 51 comments that Avienus' prooemium is an abridgement of the history of the world in the guise of a hymn; it is not a ponderous accumulation of vague philosophical and religious formulas. It shares (pp. 43-44) many features with late Latin hymns.

[34]For a similar use of titles for a god, compare Seneca, Consolatio Ad Helviam Matrem 8.3. The Jupiter depicted in AvPh 21-26 bears some resemblance to the God of the book of Genesis. Sieg, p. 40 states that Avienus was probably not a Christian, but may have read books of scripture.

[35]Soubiran, Aviénus emends furor (AvPh 67) to fauor in his text. For his justification, see his "Notes critiques aux Aratea d'Aviénus", Pallas, 24 (1977), p. 84: "fauor y révèle l'orgueil du poète ⟨élu⟩ de Jupiter". This emendation, unfortunately, eliminates the important thematic emphasis which is conveyed by the word furor (AvPh 67).

[36]Furor is an important motif in Vergil's Aeneid. See, for example, Aeneid 4.101 and 7.386. Avienus may have borrowed the motif from

Vergil's poem. Compare Soubiran, Aviénus, pp. 67-68 on Avienus' admiration of Vergil and R.A. Markus, "Paganism, Christianity and the Latin Classics" in J.W. Binns, ed., Latin Literature of the Fourth Century (London: Routledge and Kegan Paul, 1974), p. 11 on the devotion of fourth century pagan writers to Vergil's works.

[37]See Hesiod, Theogony 901-902 which states that Dikē is the daughter of Zeus and Themis.

[38]Martin, p. 11, n. 16 sees a link between the prooemium and the Dikē passage in the words προτέρη γενεή (APh 16). Maurach, Germanicus und sein Arat, p. 156, n. 102 states that one could say that Aratus never identified his goddess with justice; this identification was an innovation of Germanicus. In view of APh 105, however, his statement seems unfounded.

[39]Maurach, p. 150, n. 80, on the contrary, takes a completely opposite view of the characters of Dikē and Virgo. In his opinion, Aratus' Dikē is less forceful while Germanicus' Virgo is stern and full of reproaches for mankind. He stresses (p. 151, n. 81) that Virgo is the inflexible goddesss. Compare Steinmetz, p. 463 who states that Aratus never gives a description of Dikē but leaves it to the imagination of the audience to form a picture of her.

[40]Steinmetz, p. 463 points out that Iustitia was given cult status at Rome by Augustus. Compare Ovid, Epistula ex Ponto 3.6.23-26. For a brief discussion of Ausustus' legal reforms, see, for example, Berger, pp. 553-555. A. Le Boeuffle, ed., Germanicus: Les Phénomènes d'Aratos (Paris: Les Belles Lettres, 1975), p. 8, n. 7 remarks on the moral quality of the passage in comparison with the institutional character of the corresponding passage in APh. Maurach, Germanicus und sein Arat, p. 215, n. 299 comments that Germanicus stresses in his poem that god and man (that is, Augustus) work together to rule the universe.

[41]Compare the reference to Bellona at the battle of Actium found in Aeneid 8.703.

[42]For a similar statement compare Vergil's Eclogue 4.42-45. Vergil's lines are a positive affirmation of the happiness of the Golden Age, while Avienus' verses are a criticism of the degeneration which followed the Golden Age.

[43]Compare Martin, Phaenomena, p. 168, "du ciel", and G.R. Mair, ed., Aratus (Cambridge, Mass.: Harvard University Press, 1955, repr. 1977), p. 227, "from the sky".

[44]D.A. Kidd, "The Pattern of Phaenomena 367-385", Antichthon, 1 (1967), p. 15 states that the theme of the passage is the origin of the familiar constellations and how they came to be named. But, as our discussion indicates, this passage expresses the theme of the entire poem, Zeus and justice.

[45] The context for the word _natura_ seems philosophical. Compare Seneca, _Epistulae_ 90.16 and 90.44.

[46] Cicero's philosophical views are eclectic, and his views of religion as they are depicted in his works are philosophical. Cicero studied under Epicureans when he was young, and an Epicurean disbelief of the gods is expressed in _De Natura Deorum_ 1.16-20, which may be compared with Lucretius, _De Rerum Natura_ 1.62-101. E. Panichi, _Gli Aratea e i Phaenomena_ (Milan and Rome and Naples: Società Editrice Dante Alighieri, 1969), p. 27 notes that Cicero's practicality contrasts with the religious sense expressed in the corresponding passage from the Greek poem. Maurach, _Germanicus und sein Arat_, p. 213, n. 296 notes that Cicero has demystified the world of Aratus and eliminated the Aratean sense of awe.

[47] A certain degree of skepticism is evident in this passage from Germanicus' translation; _si uere_ (GPh 264) and _fida uetustas_ (GPh 261) demonstrate a dependence upon ancient accounts. In addition, according to Maurach, _Germanicus und sein Arat_, p. 186, n. 260, GPh 260 (_deficiente oculo distinguere corpora parua_) is a rational-physical explanation.

[48] Soubiran, _Aviénus_, p. 119, n. 3 criticizes this description as excessive, but it is appropriate to and supportive of the theme of _furor_ which is expressed throughout the poem.

[49] The phrase ἐκ Διός (APh 293) is usually translated as "from heaven" (Mair, p. 231); compare "du ciel" (Martin, _Phaenomena_, p. 168).

[50] Soubiran, _Cicéron_, p. 178, n. 1 comments that making Ara the subject of the action is unusual and may indicate an alteration in the text.

[51] Cicero appears to depart from his thematic plan in CPh 186-188 where he notes that Arcturus has received a large area for its lofty orbit from Jupiter, while Ara has received a small area for a lower one. This reference to Jupiter is not paralleled by a reference to Zeus in the corresponding lines from APh. Jupiter is also mentioned in the poem in non-thematic passages (CPh 20, 294) and in lines too incomplete to allow us to know whether they formed part of a thematic denial of traditional gods (CPh I, XIX).

[52] For further information on this point, see n. 17 of this chapter.

[53] G. Maurach, "Aratus and Germanicus on Altar and Centaur", _AClass_, 20 (1977), p. 130 comments that _pacem pelagi soluere_ "smacks of rhetoric". A more satisfactory explanation, however, is to connect its use in the verse with Germanicus' theme.

[54] For the role of Ara in the battle, see Manilius, _Astronomica_ 1.421-431 and 5.340-343.

[55] Soubiran, _Aviénus_, p. 122, n. 1 states that Avienus is moralizing in this passage.

[56]Martin, _Phaenomena_, significantly, does not comment on this important passage.

[57]Support for the lack of an invocation to Diana in Cicero's translation may be found in Soubiran, _Cicéron_, p. 189, n. 10. Soubiran states that the presence of _Dianam_ at the end of CPh 420 is not favorable to the hypothesis of an invocation to the deity at the beginning of the preceding verse which is missing from the text.

[58]D.P. Kubiak, "The Orion Episode of Cicero's _Aratea_", _CJ_, 77 (1981), p. 16 mistakenly identifies the theme of the Orion passage as madness. Careful reading of the entire text of Cicero's translation indicates that madness is only a part of the passage which is subordinate to the general theme of rationalism or skepticism. See also the discussion of the style of this passage in P.C. Brush, "Cicero's Poetry" (Ph.D. dissertation, Yale University, 1971), pp. 218-223.

[59]Le Boeuffle, _Germanicus_, p. 40, n. 6 comments on the religious and moralizing character of this passage. Steinmetz, p. 474 notes that the tale of Orion and Scorpio is a description of world order.

[60]J.C. Thibault, _The Mystery of Ovid's Exile_ (Berkeley: University of California Press, 1964), p. 19 comments that many of Ovid's friends were adherents of Germanicus, and that Ovid (p. 85) was a loyal supporter of Germanicus. Ovid dedicated the _Fasti_ to Germanicus and included an invocation to Germanicus, the poet, in _Epistula ex Ponto_ 4.8.65-78. For a recent survey of evidence regarding Ovid's banishment, see R. Syme, _History in Ovid_ (Oxford: Clarendon Press, 1978), pp. 215-229.

[61]The _furor_ of Orion was also implied in Avienus' discussion of Orion's pursuit of Electra (_AvPh_ 583-584). Compare Soubiran, _Aviénus_, p. 118, n. 9.

[62]Compare the initial stages of Amata's madness, described by Vergil in _Aeneid_ 7.354-356.

[63]Avienus adds, independently of Aratus' passage, a thematic emphasis to the discussion of Lyra (_AvPh_ 618-635). In _AvPh_ 624-628, Avienus tells the tale of Orpheus whom Apollo taught to play the lyre. The massacre of Orpheus by the Bacchantes is an example of the _furor_ instilled by the god Bacchus which was noted in the prooemium (_AvPh_ 70). Orpheus may also be said to have been possessed with _furor_ in the form of artistic inspiration.

APPENDIX I

COMPARISON OF THE TEXTS OF AVIENUS' TRANSLATION
EDITED BY A. BREYSIG (1882) AND J. SOUBIRAN (1981)

Note: The mark * before the line reference indicates the places at which
the new emendation provided by Soubiran has altered the metre of
the line as determined from Breysig's text.

	Breysig	Soubiran
2	et celsam	excelsam
13	mentis	molis
15	fetus	foedus
21	factus	sanctus
26	inmixtus	immixtus
30	adque	atque
36	desit	defit
38	auris	aruis
44	infundit	infudit
47	inmemor	immemor
67	furor	fauor
76	Cirra	Cirrha
88	usque	iuge
127		lacuna after 127
128	imbuerit	imbuit et
133	conuertitur haut	cum uertitur haud
* 136	dux est	duce te
140	adque	atque
155-161		155, 156, 158, 159, 160, 161, 157

	Breysig	Soubiran
157	dimittitur	demittitur
175	Panuasi	Panyasi
177	inmodici	immodici
182	ille	illa
186	insidisse	insedisse
192	inpressio	impressio
195	mersumque	uersumque
199	inlustrant	illustrant
206	nominis	numinis
223	gnato	nato
242	tanta	tenta
254	usque	utque
256		lacuna after 256
* 266	flammantur . . . instar	flammam . . . uber at infra
267	lori	claris
269	reliquo	rutilo
274	inmensum	immensum
335	permaesto	per maestos
337	adque	atque
343	inplet	implet
347	extremo	externo
355, 356, 358, 357, 359, 360		355-360
358	claram . . . arcton	clara . . . Arcto
393	qua sese semita	quae semet tramite
* 398	statim cum	stabilito
402	cyaneum	coeaneum

	Breysig	Soubiran
406	implebit	impleuit
407	haec	sic
409	inpiger	impiger
413	adque	atque
418	inmittunt	immittunt
429	haut	haud
440, 447, 441, 442, 443, 444, 445, 446, 448, 449		440, 441, 447, 442, 443, 444, 445, 446, 448, 449
447	mominis hilum	nominis. Illum
453	adstat	absunt
469	uincula	nubila
472	qua	quae
475	hunc	hos
477	adque	atque
483	haut	haud
496	lymfa	lympha
499	adque	atque
503	ecus	Equus
510	ab lapsu	ablapsu
525	brachia	bracchia
533	gemina	geminas
540	ductos	doctus
541	Derceti	tertia
544	pennae	pinnae
545	ecus	Equus
546	aduerso	auerso

	Breysig	Soubiran
582	Minthes	Sminthes
* 591	detestatam	distet ut a ui
592	lacrimare ruinas	lacerata ruinis
595	istac	ista
610	disicit	dissicit
611	annuit	adnuit
614	designant	dissignant
627	inpia	impia
631	ac nixi . . . ponto	adnixi . . . porro
636	Cygnus	Cyncnus
639	his	hic
641	laeuam	laeuo
659	clamarit	clamabit
664	tum freta	functio
666	focis	phocis
678	antennarum	antemnarum
687	brachia	bracchia
709	inlustrat . . . adque	illustrat . . . atque
713	Olympi	Olympus
714	abusque	ab usque
* 719	a borea inque . . . se gerit	in Borean . . . deserat
720	sub	ut
727	inbuit	imbuit
729	inmodici	immodici
735	inminet	imminet

	Breysig	Soubiran
737	si qua	siqua
740	inlabitur	illabitur
741	Sirius	spiritus
743	adque . . . si quae	atque . . . siquae
749	urguetur	urgetur
758	solemne	solemnem
761	remulsi	remulco
762	subeunt	subdunt
766	ducit et	ducitur
772	arcton	atro
777	duorum	dolorum
780	manat	manans
781	aequor id	aequoris
784	inpellit	impellit
793	alnis	ulnis
803	anfractibus	amfractibus
819	nec expectanda	nec spectanda
* 837	lumen lumine forte	lumina deuia fonte
838	conlidunt	collidunt
842	crura	ora
851	tendit	condit
882	super stantem	superstantem
888	Pelion	Pelius
908	haut	haud
909	ductus	doctus

	Breysig	Soubiran
* 911	aliquo pacto deprendere	alio deprendere sidere
* 921	uis tamen istis	uis ita in istis
922	labentis	labenti
923	unicaque in	unica quin
940	inlustrante	illustrante
963	uirgineusque . . . imminet	uirgineosque . . . inuidet
968	medio	medium
971	superuoluit	super uoluit
981	lucet	pistris
1005	tenacia	edacia
1018	haut	haud
1021	inplicet . . . orbis	implicet . . . orbes
* 1025	namque	nam
* 1037	hoc signo	exiguo
1038	siquis	si quis
1045	includunt	includant
1056	telluris super eminet	tellurem supereminet
1057	inlabens	illabens
1068	praetextaque	praetentaque
1071	qua	qui
1095	incipiens	inspiciens
* 1099	reses ortum uiscere profert	non uultum uiscere honorans
1105	extulerant	extima erant
1107	crure	iuge
1111	exilit	exsilit

	Breysig	Soubiran
1120	ponti	ponto
1121	inpiger	impiger
1126	exerit	exserit
1128	flagratas	falcatas
1136	brachia	bracchia
1137	aethere	aequore
1139	adque sub undis	atque sub unis
1145	exerat	exserat
1146	hoc	haec
1152	brachia	bracchia
1153	iam gurgite	iam gurges
1154	aequora	aequore
1158	super inuehit	superinuehit
1161	brachia	bracchia
1162	exerit	exserit
1168	expuit	exspuit
1175	inmodicusque	immodicusque
1176	inpia	impia
1181	brachia	bracchia
1182	inpia	impia
1183	foret	daret
1184	inmodico . . . illicet	immodico . . . ilicet
1190	conmercia	commercia
1198	brachia	bracchia
* 1201	relicum . . . ast a litore	reliquum . . . altior aere

	<u>Breysig</u>	<u>Soubiran</u>
1202	inocciduum	inocciduo
1215	in ollis	molis
1217	relicum	reliquum
1221	surgens agitat	surgens agit a
1222	aequora mittunt	alta remittunt
1236	secuntur	sequuntur
1248	adluuione	alluuione
1249	adque	atque
1252	Cilicis	gelidi
1259	rutila cum	rutilat tum
1260	patulas	paruas
1262	adque	atque
1269	solum	salum
1271	adque	atque
1274	haut	haud
1277	brachia	bracchia
1282	sursum	rursum
1298	adque	atque
1312	expuit	exspuit
1313	sorbet	sorbent
1314	quid nunc	quin et
* 1320	credo	credere
1347	adque	atque
1352	ac	at
1366	nam qui solem	namque Solon

	Breysig	Soubiran
1367	ut lunae	ut luna in
1373	et	sed
* 1377	Hic est fons unde et	Hoc ut fonte Meton
1378	quom	quo
1379	quom	quo
1426	agri	acer
1430	inlisio	illisio
1432	sulfure	sulpure
1440	telluri	telluris
1448	inbuit	imbuit
1459	adque	atque
1460	si . . . ortu	sic . . . ortum
1461	percussi tenuem	percussi ut tenuem
1465	cursus	currus
1471	adque	atque
1472	inmodice	immodice
* 1479	si luna alta tuens	summati et uento
1488	inmodice	immodice
1497	deprehensa	deprensa
1501	edixerit	dixerit
1518	certo uia	certo ⟨et⟩ uia
1521	fusa	fracta
1522	lampada	lampade
1532	subito	subitos
1539	inmodica	immodica

	Breysig	Soubiran
1567	faciem	pacem
1573	adque incendia Solis	atque incendia sollers
1574	sollers	solis
1578	labenti	liuenti
1594	non numquam	nonnumquam
1597	defluit	defluet
1603	adque	atque
1604	defluxerit	diffluxerit
1605	adque	alta
1607	inmodicum surgens	immodicum ⟨primo⟩
1623	inlapsum	illapsum
1627	et in	et ⟨heu!⟩
1643	adeo	deo
1662	cadet	ruet
* 1680	saeuitura	si ruitura
1682	tenues	tenui
1695-1703		1695, 1697, 1698, 1699, 1700, 1701, 1702, 1696, 1703
1702	sunt	sint
1708	natabunt	madebunt
1709	relinquet	relinquens
1710	ecfert	effert
1722	torrens . . . ahenum	torret . . . aenum
1723	circumlabente	circumlambente
1724	ciet	trahit
1725	siue	sin

	Breysig	Soubiran
1731	clara	uasta
1734	quam	quae
1735	notatur	notato
1741	proprium	proprio
1745	pinnis	pennis
1752	ignis	ignes
1766	apes	apis
1777	breue . . . crassae	breues . . . crassa
1780	inmodicis	immodicis
1782	brachia	bracchia
1800	quique . . . uersabit	quisque . . . uersarit
1804	arcton	Arctum
1818	inpulsa	impulsa
1822	aestus	aestas
1826	succincta	sic cincta
1829	tum . . . agmina	se . . . agmine
1834	denique et	sed cuique
1838	cibi	cibis
* 1839	pastoris id	pastori
1841	adpetat	appetat
1845	conpellat	compellat
1849	inplent	implent .
1853	inluuie	illuuie
1855	adfectansque	affectansque
1859	praesentiat ultro	praesentit adultis
1868	si confluxere	si sic fluxere

APPENDIX II

PARALLEL PASSAGES

	APh	CPh	GPh	AvPh	ALPh
Introduction	1-18	fg. I, II	1-16	1-76	1-18
Axis, Poles	19-27	III-V	17-26	77-104	19-27
Bears	28-44	VI-VIII	27-47	105-137	28-30, 36 40-44
Draco	45-62	VIII-X	48-64	138-168	45-62
Engonasin	63-70	XI-XII	65-69	169-193	63-68, 70
Corona Borealis	71-73	XIII	70-74	194-203	71-73
Ophiuchus	74-88	XIV-XV	75-87	204-249	74-87
Scorpio	89-90	-	88-89	250-253	-
Bootes	91-95	XVI.1-4	90-95	254-272	91-95
Virgo	96-136	XVI.5-6- XIX	96-139	273-352	96-104, 111-136
Vindemiator and nameless stars	137, 139- 146	XX-XXI	140-146	353-366	137, 139- 146
Gemini, Cancer, Leo	147-155	XII-XXIII	147-156	367-404	147-155
Auriga	156-166	XXIV-XXVI	157-173	405-420	156-166
Taurus, Hyades	167-178	XXVII-XXVIII	174-183	421-439	167-178
Cepheus	179-187	XXIX	184-192	440-449	179-187
Cassiopeia	188-196	XXX	193-200	450-458	188-191
Andromeda	197-204	XXXI	201-206	459-469	197-204

	APh	CPh	GPh	AvPh	ALPh
Pegasus	205-224	XXXII	207-223	470-507	205-224
Aries	225-232	XXXIII, 1-3	224-233	508-526	225-232
Triangulum	233-238	4-11	234-240, fg. VI	527-538	233-238
Pisces, Piscium	239-247	11-19	241-247	539-560	239-247
Perseus	248-253	20-26	248-254	560-567	248-253
Pleiades	254-267	27-41	255-269	568-617	254-261, 264
Lyra	268-274	42-46	270-274	618-635	268-269
Cygnus	275-281	47-54	275-283	636-644	275-281
Aquarius, Capricorn	282-299	55-71	284-305	645-668	282-288, 290-291, 294, 296-299
Sagittarius	300-310	72-83	306-314	669-688	300-310
Sagitta, Aquila	311-315	84-90	315-320	689-699	311-315
Delphinus	316-318	91-95	321-323	700-710	316-318
Transition, north-south	319-321	96-101	324-327	711-717	319-321
Orion	322-325	102-106	328-332	718-723	322-325
Canis Major (Sirius)	326-337	107-119	333-340	724-746	326-335
Lepus	338-341	120-125	341-343	747-755	338-341
Argo	342-352	126-138	344-355	756-768	342-352
Cetus	353-358	139-144	356-361	769-779	353-358
Eridanus	359-366	145-154	362-371	780-806	359-366
nameless stars under Lepus	367-385	155-166	371-378	807-822	367-385
Piscis Australis	386-388	167-169	379-381	823-832	386-388

	APh	CPh	GPh	AvPh	ALPh
unnamed – Hydor	389-401	170-182	382-392	832-844	389-394, 396-401
Ara	402-430	183-202	393-413	845-873	402-410, 414-430
Centaur, Lupus	431-442	203-213	414-425	874-890	431-442
Hydra, Corvus, Crater	443-449	214-221	426-432	891-901	443-449
Procyon	450	221-222	433	902-903	450
Transition	451-453	223-225	434-436	904-907	451-453
planets	454-461	226-236	437-445	908-929	454-456, 458-461
four orbs	462-468	237-244	446-454	930-936	462-468
Milky Way	469-479	245-252	455-458	936-949	469-476, 478-479
Tropic of Cancer	480-500	253-271	459-481	950-976	480-500
Tropic of Capricorn	501-510	272-284	482-495	977-991	501-510
Equator	511-524	285-295	496-510	992-1010	511-524
Zodiac	525-544	296-319	511-531	1011-1045	525-527, 544
Zodiac	545-558	320-340	532-572	1046-1059	545-558
Paranatellonta	559-568	341-349	573-588	1060-1076	559-568
with Cancer	569-589	350-369	589-603	1077-1102	569-589
with Leo	590-595	370-378	604-611	1103-1112	590-595
with Virgo	596-606	379-392	612-622	1113-1127	596-606
with Chelae (Libra)	607-633	393-417	623-643	1128-1166	607-633
with Scorpio	634-664	418-453	644-672	1166-1217	634-664

	APh	CPh	GPh	AvPh	ALPh
with Sagittarius	665-682	453-464	672-685	1217-1241	665-682
with Capricorn	683-692	465-471	686-692	1242-1260	683-692
with Aquarius	693-698	472-479	693-698	1261-1269	693-698
with Pisces	699-709	480	699-705	1269-1283	699-709
with Aries	709-714	-	706-707	1284-1291	709-714
with Taurus	714-723	-	708-718	1291-1307	714-723
with Gemini	724-732	-	719-725	1308-1325	724-732

	APr	CPr		AvPr	ALPr
Moon	733-739	-		1326-1351	733-739
constellations	740-751	-		1352-1362	740-751
Meton's cycle	752-764	-		1363-1376	752-764
the unforeseen; hints	765-777	-		1377-1445	765-767, 769-777
Moon	778-818	-		1446-1542	778-818
Sun	819-891	fg. I		1543-1650	819-891
Phatnē	892-908	II		1651-1669	892-902, 904-906
the sea	909-912	III.1-6		1670-1675	909-912
things of the sea	913-923	III.7-9		1676-1690	913-923
things of the sky	924-941	-		1691-1695	924-941
the marsh	942-953	IV.1-9		1696-1706	942-953
on the land: oxen, ants, worms	954-972	IV.10-11		1707-1717	954-972

	APr	CPr	AvPr	ALPr
inside: lamp, fire	973-987	-	1718-1723	973-987
the clouds	988-993	-	1724-1730	998-993
Phatnē, lamps, birds	994-1012	-	1731-1745	994-1002
dim star light, clouds	1013-1020	-	1746-1757	-
birds	1021-1043	-	1758-1773	1021-1025 1027-1043
trees	1044-1063	V	1774-1789	1044-1063
wasps, mating herds	1064-1081	-	1790-1803	1064-1081
oxen and sheep	1082-1093	-	1803-1819	1082-1093
birds	1094-1103	VI	1820-1845	1094-1103
unusual actions of animals	1104-1131	-	1846-1857	1104-1126, 1128-1131
mice, dogs	1132-1141	-	1857-1863	1132-1137
advice	1142-1154	-	1864-1878	1142-1154

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