

The Astronomica of Manilius:  
Notes, studies and translation.

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Preface.

The following thesis, "The Astronomica of Manilius: Notes, studies and translation", submitted in fulfilment of the requirements for candidature for the degree of Master of Arts (Hons.) in the University of Sydney, consists of three parts:

(1) A translation into English of the whole of the Astronomica of Manilius.

(2) "Notes and conjectures on the Astronomica of Manilius".

These in no way pretend to form a commentary. They are merely notes on particular passages where I feel that the notes in the edition of A. E. Housman are obscure or unsatisfactory or his text corrupt. In writing the notes I have also taken account of the editions and studies listed in the bibliography.

(3) Various studies placed before the translation, namely:

(a) A collation of two of the three manuscripts upon which Housman's text is based, the Codex Gemblacensis and the Codex Matritensis (Book 1 only). I have not been able to obtain a microfilm of the third manuscript, the Codex Lipsiensis. I have made these collations firstly to check the accuracy of Housman's apparatus criticus (I have found that it is very accurate and leaves out nothing in G or M worth recording), secondly, as a preliminary to a complete classification of all the extant manuscripts of Manilius, which I hope to undertake in

the future.

- (b) A description of the form and uses of a computer generated concordance to the Astronomica that I have produced. I present a copy of this concordance together with my thesis. I intend to use the concordance to make a Lexicon to Manilius.
- (c) A short sketch of a theory, which I hope later to develop more fully, when I have access to a better library than that of Sydney University, that books have been lost between Book 4 of the Astronomica and the book now known as Book 5.

I am grateful to my supervisor, Dr. H. D. Jocelyn (Reader in Latin, University of Sydney) for correcting many mistakes and suggesting many improvements in the thesis, in particular in the translation.

I am also grateful to Professor A. J. Dunston (Professor of Latin, University of Sydney) for providing me with a print-out of his microfilm copy of the Matritensis manuscript of Manilius and obtaining a microfilm of the Codex Gemblacensis, for lending me his notes on the various hands in the Matritensis and for checking part of my collation of Book 1 of it.

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I have also consulted the translation of extracts from Book 1 printed by Goold in "Aduersaria Maniliana" (Phoenix, 12, 1959, pp 93-112).

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The Manuscripts of the Astronomica.

The text of the Astronomica of Manilius established by Housman depends on three manuscripts, to which Housman (whom I follow in the apparatus criticus I append to the extracts from Manilius which I print in my "Notes and Conjectures on the Astronomica of Manilius") gives the following sigla:

G Codex Gemblacensis, now Bruxellensis 10012.

L Codex Lipsiensis 1465.

L<sup>2</sup> The nearly coeval corrections found in L

M Codex Matritensis 3678 (in Housman's time called Codex Matritensis M 31).

In addition there is preserved an imperfect collation of a certain Codex Venetus, to which I give the siglum V.

These four manuscripts are derived from a common archetype, but G L and V have a common ancestor not shared by M.

G and L<sup>2</sup> have in addition a number of good readings (some shared, some peculiar to one or other of them) not found in the other manuscripts. Some of these readings may be due to conjecture, but some at least are drawn from a manuscript source.

The first folio of M (containing lines 1-82 of Book 1) is now missing. Hence Housman employed three manuscripts copied from M before the loss of this folio to reconstruct the text in 1.1-82. He gives them the following sigla which I also adopt:

U Codex Vrbinas 667, Vaticanus.

H Codex Holkhamicus 331.

R Codex Vrbinas 668, Vaticanus.

I have also used the following sigla:

dett. One of the inferior manuscripts, derived ultimately from L or M. They are of no value except for the conjectures they contain.

Cod.Flor Codex Florent.Laur.XXX 15

Cod.Bodl. Codex Bodleianus Auct.F 4.34

O The consensus of GLM.

I have collated in microfilm the whole of G and the first book of M with the editio minor of Housman. Although Sydney University Library ordered a microfilm copy of L from the Leipzig University Library in May 1966 no copy has been sent. It may be that the manuscript has not survived the second world war.

I give below the readings of G and the first book of M which are not found in the apparatus criticus of Housman's editio minor. I have not recorded common medieval spellings (such as celi or coeli for caeli) or false word divisions consisting in the running together of words or the separation of a single word into two or more elements. I have not attempted to distinguish the later hands. The only distinction I make is between the hand of the original scribe (man.1) and all later hands, which I call man.2. The later hands did not have access to any manuscript evidence not possessed by us.

I give below the symbols and conventions I use:

I print first the reading in Housman's editio minor, followed by the reading of G or M (denoted by G or M as the case may be) G<sup>1</sup> or M<sup>1</sup> indicates a correction made in the hand of the original scribe.

G<sup>2</sup> or M<sup>2</sup> indicates a correction made by hand other than that of the original scribe.

G<sup>x</sup> or M<sup>x</sup> indicate that I do not know whether the correction was made by the first hand or not.

A question mark over a letter indicates I am not certain whether that is the letter in the MS or not.

A question mark after a suprascript 1 or 2 indicates that I am not certain I have ascribed a correction to the right hand.

An entry in brackets, followed by a question mark, indicates that I am not certain whether a correction has been made.

Letters contained in brackets are either understood in the manuscripts or denoted by marks of abbreviation.

I have found only two mistakes in Housman's apparatus. At 2.890 the reading of GM is credere genti, not credere gentis and at 3.496 reliquit, not relinquit. Since his apparatus is correct in both places in his editio maior, these are mere transcriptional errors. Housman has omitted no readings which deserve to be included in an apparatus.

Readings from the Codex Gemblacensis (G).

<u>Book 1.</u>	
5 nutantis)nutantes G	238 oris) horis G
13 uocat) uacat G	245 somnosque) somnos G
14 inmenso) immenso G	247 inmensi) immensi G
18 qua) que G	269 derigit) dirigit G
23 inmenso) immenso G	274 cludentis) claudentis G
24 inmittit) immittit G	283 aetherios) aethereos G
25 licuit) lucuit G	284 ddirectus) directus G
munere) munera G	289 cumque) cunque G
(ue)l (muner)e, G <sup>1</sup> <u>s.script.</u>	295 inmensum) immensum G
41 regalis) regales G	299 Cynosura) cenosura G
42 tangentis) tangentes G	314 frigentis) frigentes G
46 tum) tunc G	330 inmensum) immensum G
59 percepta) precepta G	332 corpore) corpere G
71 similis) similes G	333 explicet) explic(et) G
101 tremesceret)	(ue)l (explic)at G <sup>1</sup> <u>s.script.</u>
tremisceret G	338 inposuit) imposuit G
109 adtribuit) attribuit G	346 tum) cum G
150 complexus) complexus G	347 utrumque) utrunque G
155 natantis) natantes G	348 conprendere) comprehendere G
164 fluuidum) fluidum G	400 utrumque) utrunque G
177 fulgeret) fulgerent G	419 conmissus) commissus G
178 emenso) immenso G	424 posse) pos G (pos)se G <sup>1</sup>
207 teretis) teretes G	426 adgestos)aggestos G

427 inportantis) importantes G	537 tractu) tractu G. <u>inter</u> c et t s (?) <u>add.G<sup>x</sup></u>
438 tum) tunc G	540 immensae) immense G
440 ingentis) ingentes G	548 refugit) refugit G
358 seruet) feruet G	(ue)l (ref)i(git) G <sup>x</sup> <u>s.script.</u>
(ue)l seruet G <sup>l</sup> <u>s.script.</u>	551 imo) uno G
361 tum) cum G	563 derigitur) dirigitur G
364 quadriugis) quari iugis G	646 utramque) utranque G
377 iacet <u>om.</u> G aquis iacet G <sup>2</sup> <u>in marg.</u>	647 igni) igne G
390 fulgentis) fulgentes G	649 facilis) faciles G
392 immersus) immensus G	650 quidquid) quicquid G
394 magis) magi G	658 oras) horas G
(magi)s G <sup>x</sup> <u>supr.script.</u>	666 trahentis) trahentes G
450 similis) similes G	675 tris) tres G
479 certis) certi G	687 oblicum) obliquum G
(certi)s G <sup>x</sup> <u>supr.script.</u>	691 Sagittari) sagittarii G
489 immensis) immensos G	705 uiridis) uirides G
498 noctis) noctes G	707 partis) partes G
507 poterant) poterat G	724 oras) horas G
580 medium) mediꝝ (m) G	741 inposuisse) imposuisse G
593 tantumdem) tantundem G	742 errantis) errantes G
594 partis) partes G	748 flagrarunt) flagrarint G
596 signantis) signantes G	764 <u>ad</u> Ilium: i(d) (est) Nestore(m) G <sup>l?</sup>
601 seruantes) seruantis G	767 <u>ad</u> nigrum partum: i(d) (est) Menone(m) G <sup>l?</sup>
536 iacentis) iacentes G	

774 aetherius) aethereus G

793 tris) tres G

794 ad Deum:Iulium G<sup>x</sup>ad Tullius:Cicero G<sup>x</sup>

802 aetherii) etheri G

803 diuum) dium G

(di)u(um) G<sup>1?</sup> s.script.

812 quidquid) quicquid G

notandum e(st) om.Gsuppl.G<sup>2</sup>

816 ingentis) ingentes G

822 deprendit)dep(re)hendit G

831 tum) tunc G

840 compagine) compagine G

850 uolucris) uolucres G

861 complexum) complexum G.

866 ignis) ignes G

876 excanduit) excandunt G

890 coaceruatis)

coar<sup>?</sup>eruatis G. corr.G<sup>x</sup>

906 ciuilis) ciuiles G

920 hostis) hostes G

Book 2.

11 bonis) bouis G

18 inmenso) immenso G

19 quin) qui(que) G

(ue)1 quin G<sup>1?</sup> s.script.

20 amaret) amaret G (ue)1

(ama)rit G<sup>1?</sup> s.script.

60 nam) nan G

68 inposito) imposito G

84 quamquam) quanquam G

89 inmittit) immittit G

131 umquam) unquam G

134 faciat) faciet G corr.G<sup>1?</sup>

147 aures) auras G

153 redeundo om.G suppl. G<sup>2</sup>

171 derigit) dirigit G

178 idcirco) iccirco G

184 quia) quia G

(ue)1 q(ue) G<sup>1</sup> s.script.

187 Arquitenens) arcitenens G

202 adtollat) attollat G

208 nunc) tunc G corr.G<sup>1</sup>

210 adtribuit) attribuit G

211 Sagittari) sagittarii G

235 eget) ag(et) G

frustraue) frustra G

ue add.G<sup>1</sup> s.script.

239 ecfundit) effundit G

246 Arquitenens) arcitenens G

280 Sagittari) sagittarii G

293 censetur) consentur G <u>corr.</u> G <sup>1</sup>	502 infra <u>om</u> G <u>suppl</u> G <sup>2</sup> <u>in marg.</u>
305 illud) illu <sup>o</sup> ? G	504 Arquitenens) arcitenens G
310 tris) tres G	505 Aquari) aquarii G
332 quaterna) quadrata G <u>corr.</u> G <sup>1</sup>	506 adsuevit) assuevit G
343 consumet) consum(m)et G	514 derexere) direxere G
349 tris) tres G	adtere) attendere G
353 quadratis) quadratus G	523 Arquitenens) arcitenens G
(ue)l (quadrat)is G <sup>1</sup> s.scr.	530 idcirco) iccirco G
354 submoto) summoto G	556 utrimque) utrunq(ue) G
393 submoto) su(m)moto G	560 Sagittari) sagittarii G
394 absumpto) assu(m)pto G	569 Sagittari) sagittarii G
398 submota) summota G	572 plerumque) plerunque G
408 Arquitenens) arcitenens G	574 cumque) cu(n)que G
429 hiemem inter) int(er) hiemem G	581 idcirco) iccirco G
430 utrimque) utrunque G	582 umquam) unquam G
435 cuique) cu(n)q(ue) G	609 ferantur) feruntur G <u>corr.</u> G.s.scr.
464 inperitat) imperat et G Aquari) aquarii G	617 numquam) nunqua(m) G
471 idcirco) iccirco G	623 Nemeaee) nemee G
476 adfectus) affectus G	624 idcirco) iccirco G
487 nectit <u>om</u> G <u>suppl</u> G <sup>2</sup> <u>in marg.</u>	628 quicumque) quicunq(ue) G
	630 immobile) immobile G
	633 Scorpios) scorpius G
	639 conmutant) co(m)mutant G

- 660 conexa) connexa G
- 662 iuuenis) iuuenes G
- 666 quemquam) quenquam G
- 668 quaecumque)  
quecunq(ue) G
- 671 idcirco) iccirco G  
adfines) affines G  
que om.G
- 677 submota) summota G
- 707 idcirco) iccirco G
- 710 femina) femia G  
corr.G<sup>1</sup> s.script.
- 716 adtribuuntur)  
attribuuntur G
- 741 dodecatemorium)  
duodecathemoriu(m) G
- 745 quaeque) cunq(ue) G
- 757 tum) tunc G
- 778 linquunt) linquit G  
(linqu)u(t) G<sup>1</sup> s.script.
- 815 adserat) asserat G
- 820 quamquam) quanquam G
- 845 aetatis) aestatis G  
adserit) asserit G
- 856 cumque) cunq(ue) G
- 878 compulsi) co(m)pulsi G
- 879 et om.G
- 890 crede regenti)  
credere genti G  
(Housman is mistaken)
- 899 numenque) numen G  
q(ue) add.G<sup>1</sup> s.script.
- 901 plerumque) plerunq(ue) G
- 917 titulum) titulus G  
titulu(m) G<sup>1</sup>
- 922 adserit) asserit G
- 926 uenerem) uentrem G  
mouere) mouire G  
corr.G<sup>1</sup> s.script.
- 935b duorum) deorum G  
corr.G<sup>1</sup> s.script.
- 952 mortique locatur  
add. G<sup>2</sup>
- 954 subripit) supripit G  
Book 3
- 9 Colchida) colchica G
- 21 inmissum) immissum G
- 23 sunt acta) si tacta G
- 36 quicumque) quicunq(ue) G
- 38 inpendas) impendas G
- 60 numquam) nunquam G
- 67 quotcumque) quodcunq(ue) G

68 quicumque) quęcunq(ue) G	315 Phoebus) phebi G
77 traherentur) traheret(ur) G	318 quamquam) quanq(uam) G
80 <u>post</u> queq(ue) <u>spatium</u>	tris) tres
<u>IV litt.G</u>	324 quidquid) quicq(u)id G
81 caperet) capereit <sup>?</sup> G	327 et) et G (corr.ex ec)?
89 septem ) VII G	363 unquam) unqua(m) G
101 fulgentis) fulgentes G	367 numquam) nunq(uam) G
102 quidquid) quicq(ui)d G	378 orbe) ore G
104 adsuevit) assuevit G	389 erret) herr(et) G
107 conpositum) compositum G	395 quacumque) quacunq(ue) G
110 adpositis) appositis G	<u>IV</u>
114 inpositum) imposita G	28 montis) montes G
117 quidquid) quicquid G	34 iacerent) iacer(et) G
136 domus exemplis) exe(m)plis	corr.G <sup>1</sup> <u>s.script.</u>
domus G. <u>corr</u> G. <sup>1</sup>	39 Trasimenne) tasumene G
137 conpositi) composita G	49 numquam) nunq(uam) G
144 sucos) sucus G	73 morbus) morbi <sup>?</sup> G
148 inrita) irrita G	86 tulit) tulit G ( <u>corr.ex</u>
156 utrumque) utrunq(ue) G	tulet)?
182 adfirmes) affirmes G	88 breuioris) breuiiores G
191 quodcumque) quodcunq(ue) G	96 merentis) merentes G
192 tum) tunc G	135 adseruit) asseruit G
241 quocumque) quocunq(ue) G	136 Arachnaeo) araneo G
278 sequuntur) sequuntur G	151 fronte) fronde G
290 quot) quod G	(ue)l (fron)te G <sup>1</sup> <u>s.script.</u>
298 adscribere) asscribere G	154 gracilis) graciles G
304 nam qua) nunq(uam) G	156 que <u>priore loco om.</u> G

- 173 optando) obtando G  
 180 postis...superbos)  
     positis...superbis G  
     postes...superbos G<sup>2</sup>  
 200 inpedit) impedit G  
 203 noctem) nocte G  
     Chelae) celeu(m) G  
 208 inposuit) imposuit G  
 215 quodcumque) quodcunq(ue)G  
 220 ardentis) ardentis G  
 229 quodcumque)quodcunq(ue)G  
 239 inpositum) impositum G  
 244 quidquid) quicq(u)id G  
 254 noctis) noctes G  
 260 iuuenalis) iuuenilis G  
 263 inludere) illudere G  
 288 naualis) nauales G  
 297 partis) partes G  
 304 que om. G  
 305 conpendia) compendia G  
 312 partem) partem<sup>?</sup> G  
     (corr. in partem<sup>?</sup> G<sup>1</sup>)  
     111  
 415 utrumque) utrunq(ue) G  
 418 quot) quod G  
 420 quota demitur)  
     ?  
     quoc ademit G  
 423 exsuperat) exuperat G  
 427 quod) quot G  
     exsuperat) exuperat G  
 431 numeros) numerus G  
     corr. G<sup>1</sup>  
 449 que om. G  
 469 namque) nanq(ue) G  
 481 tum) tunc G  
 488 cumque) cunq(ue) G  
 489 partes) partus<sup>?</sup> G  
 492 partis) partes G  
 493 uicem) uicem G corr. G<sup>1</sup>  
 496 relinquet) reliquit G  
     (Housman is mistaken)  
 504 ortu) ortu(m) G  
 505 steterit) staeterit G  
 507 celeres) ferret G  
     feret G<sup>1</sup>  
     imo) uno G  
 514 quo Sol) quosol G  
 516 secuntur) sequuntur G  
 519 adserit) asserit G  
 526 subtexta) sub tecta G  
 543 quamquam) quanqua(m) G  
 554 menses om. G, suppl. G<sup>1</sup>  
 568 adpositis) appositis G  
 577 adpositi) appositis G

- 608 horoscopus) horoscopus G  
 610 adcumulat) accumulatus G  
 relinquit) reliquit G  
 614 dena) dent G corr.G<sup>1</sup>  
 617 inmatura) immatura G  
 618 sed) ed G, spatio  
rubricatori relicto.  
 621 adpellant) appellant G  
 628 auget) auget G  
 640 supplet) supplet G  
 646 nam) iam G  
 650 exsuperare) exuperare G  
 subcumbere) succumbere G  
 652 tum) tunc G  
 657 post natura spatium  
unius litterae G  
 ap subscript.G<sup>2</sup>  
 666 ualent) ualeant G. corr. G<sup>1</sup>  
 669 figuras) figura G
- Book 4
- 2 torquemur) torquent(ur)G  
 323 derigit) dirigit G  
 329 Cancrī) cancrī G  
 (corr.G<sup>1</sup>)?  
 330 lege) legit G  
 336 Nemeae) nemeae G
- 341 conponit) conponit G  
 347 neruo) neruo? G  
 349 partis) partes G  
 352 que om.G  
 353 partis) partes G  
 359 Lanigero) lanigeros G  
 364 nomina) omine G  
 393 immunia) imunia G  
 407 inpendendus) impendendus G  
 414 post minor spatium VII  
litterarum G, in quo ia(m)  
 sucus obit add.G<sup>2</sup>  
 420 foedus) fetus G  
 421 portus) partus G  
 (corr.G<sup>1</sup>)?  
 429 mixta) mixta G. corr. G<sup>1</sup>  
s. script.  
 434 derit) deerit G  
 457 noxae) nexae G  
 459 immunis) immunis G  
 463 septuma) septima G  
 464 Nemeae) nemeae G  
 467 adpositis) appositis G  
 470 umquam) unquam(m) G  
 500 ignis) ignes G  
 540 umquam) unquam(m) G

- 544 inperium) imperium G
- 547 autumnales)  
aut tu(m) nales G
- 550 inponet) imponet G
- 560 Arquitenens) arcitenens G
- 589 isdem) iisdem G
- 590 inania) ania G  
corr. G<sup>1</sup> s.script.
- 592 amat) amūt G (corr G<sup>1</sup>)?
- 594 similis) similes G
- 601 ddirectis) directis G
- 612 Peloponnesi)  
peloponensi G
- 637 Cycladas) ciclades G
- 639 litora) littora G  
que om.G
- 644 inpulit) impulit G
- 652 isdem) iisdem G
- 656 litora) littora G
- 672 gemmis) gemin<sup>?</sup>is G
- 682 que pr.loco om.G
- 689 Troiani) traiani G
- 695 inposuit) imposuit G
- 700 adsererent) assererent G
- 702 quamquam) quanqua(m) G
- 704 namque) nanq(ue) G
- 706 Nemeaeae) nemeae G
- 708 Arquitenens) arcitenens G  
et post.om.G suppl. G<sup>1</sup> s.scr.
- 710 aliut) aliud G
- 711 idcirco) iccirgo G
- 729 Mauritania) mauritanea G
- 753 montis) montes G
- 754 Arabas) arabes G
- 759 Nemeaeae) nemeae G
- 774 inperium) imperium G
- 779 rura) rurō<sup>?</sup> G corr. G<sup>1</sup>
- 786 adserit) asserit G
- 789 proxuma) proxima G
- 791 quidquid) quicquid G
- 795 adserit) asserit G
- 796 adsiduis) assiduis G
- 801 Typhona) tphona G  
(t)i(phona) G<sup>1</sup> s.script.
- 808 proprias) p(ro)proas G  
corr. G<sup>1</sup>
- 809 namque) nanq(ue) G
- 812 adfectus) affectus G
- 814 litora litoribus)  
littora littoribus G
- 818 ecliptica) eccliptica G
- 828 conpagibus) compagibus G

- 832 heres) herens G  
842 inmersa) immersa G  
890 post sp(iritu)m spatium  
11 litt. in G  
905 inposuit) imposuit G  
914 attendere) attendere G  
926 adamas) adamans G
- Book 5
- 10 conscendere) descendere G  
con(scendere) G<sup>1</sup> s.script.  
14 errantis) errantes G  
15 squamis) spumis G  
21 Ariadnaeae) adriadnaeae G  
corr. G<sup>1</sup>  
29 quaeque) quaeque) G  
39 partis) partes G  
40 illa) illos G illis G<sup>1</sup>  
48 adpulsam) appulsam G  
52 utrimque) utrumque) G  
56 arcessitur) accersitur G  
59 fulgente) fulgens G  
66 communis) communis G  
71 ille) illa G (illa)e G<sup>1</sup>  
77 pronum) priu(m) G  
80 oblicum) obliquum G  
90 quidquid) quicquid) G  
95 inmissos) immensos G  
97 Bellerophon) Bellerophonem) G  
bellorophonte(m) G  
113 inpellit) impellit G  
122 Gracchos) graccos G  
tenentis) tenentes G  
137 uisendi) uiscendi G  
142 Pleiadas) peliades G  
146 decorae) decore G  
149 adpositis) appositis G  
175 adspirantibus)  
asspirantibus G  
204 poscere) pascere G  
206 nemeaeus) ne meus G  
212 herbis) undis G  
corr G<sup>1</sup> s.script.  
218 oras) horas G  
230 ecfundunt) effundunt G  
237 inriguos) irriguos G  
253 Ariadnaeae) adriadnaeae G  
256 floribus hortum)  
froribus ortu(m) G  
261 depinget) depinget G  
263 ecfinget) effinget G  
264 incoquet) incoquet) G  
279 artis) artes G

282 pendentis) pendentes G	490 Aquari) aquaris G
286 componitur) componitur G	494 ciuem) <u>aut</u> ciue(m) <u>aut</u>
291 nunc) <u>aut</u> hunc <u>aut</u> nunc G	cui e(st) G
313 producitur) prouducitur G	500 suggerit) suggestit G
315 ecfingit) effingit G	501 inmissos) immissos G
326 Oeagrius) oegraius G	510 hinc) hin G
344 colentis) colentes G	514 una) ?? ima G
348 adpositis) appositis G	516 lenocinium) leuocinium G
355 gementis) gementes G	525 inperat) imperat G
357 Arquitenens) arcitenens G	gazam) <u>aut</u> gatas <u>aut</u> gazas G
357 quinta). V.G.	529 momenta) monumenta G
364 Arquitenens) arcitenes G (arcitene)n(s) G <sup>1</sup> <u>s.script</u>	533 que <u>om.G.supp.G<sup>1</sup>s.scr.</u>
365 decuma) decima G	540 parentum) ?? parentum G <sup>1</sup>
375 Numidarum) mimidaru(m) G oris) horis G	542 naufragia) nafragia G corr.G <sup>1</sup> <u>s.script</u>
411 conmissa) commissa G	558 pinnis) pennis G
413 inmitis) immitis G	562 adsuetas) assuetas G
419 pinnis) pennis G	570 deriguit) diriguit G
421 sinibus) senibus G	581 inpellentis) impellentis G
428 inmotas) immotas G	584 inmensis) immensis G
436 utrumque) utrunq(ue) G	598 profundo) p(ro)rundo G <u>corr.</u> G <sup>1</sup>
445 pinnis) pennis G	611 tum) tunc G
471 componet) componet G	620 inmitis) immitis G
479 adfectibus) affectibus G	633 Ecus) equus G

635 ferentis) ferentes G	713 Delphinus) delphinos G
647 adtollit) attollit G	731 quot) q(uo)d G
677 immobilis) immobilis G	732 quot) q(uo)d G
679 complet) complet G	734 populus) pop(u)li G
688 mensis) m(er)sis G	<u>corr.</u> G <sup>1</sup>
692 permutant) p(er)mutat G	741 priorum) p(i)orem <u>aut</u>
<u>corr.</u> G <sup>1</sup> <u>S.script</u>	p(ri)orem G.

In G, folios 1-48 have 21 lines to a page (but 20v, 32v and 33v have 22). 49-100 have 22 lines to a page.

Readings from the Codex Matritensis (M).

The first folio, which contained lines 1-82, is lost.

84 commentum) co(m)m(en)ta M commentum M <sup>2X</sup>	peruidit rab soluit M rab <u>del.</u> M <sup>X</sup>
laeta) laeta M. electa M <sup>2</sup> <u>in</u> <u>marg. del.</u> M <sup>2</sup>	105 uentis) mentis M comprehendere) co(m)p(re)hendere M
86 et) ee M. et M <sup>2?</sup>	111 numen) numen M numeru(m) M <sup>2</sup> <u>in marg.</u>
87 et) ee M. et M <sup>2?</sup> in caecum) incaetu(m) M. incaecum M <sup>2?</sup> ne] nec M	115 contingat) contigat M
91 uolucrum) uolueru(m) M uolucrum M <sup>2</sup>	120 canenda) cauenda M
98 rerum causis) rerum causis M et rerum causas M <sup>2</sup>	128 in idem) unde M et <u>add.</u> M <sup>X</sup>
103 peruidit soluit)	129 mille) uille M mille M <sup>2</sup>
	134 fingunt) fingui <sup>??</sup> M

- corr. in (fing)it M<sup>2?</sup>  
 137 aut) at M(a)u(t) M<sup>2</sup>  
 138 umor)umor M h(umor) M<sup>2</sup>  
 deum) diu(m) M  
 141 nec calidis)necalidis M  
 umida) umida M h(umida) M<sup>2</sup>  
 143 habilis) habilis M  
 (h in ras) labilis M<sup>1</sup>  
 148 ordine) coline M  
 ordine M<sup>2</sup> (Poggis)  
 149 in aetherias) inatherias  
 M. (ina)e(therias) M<sup>2?</sup>  
 150 stellantis) stillantis  
 M. stellantis M<sup>1?</sup>  
 155 undas) nudas M  
 156 effudit) p(er)fundit M  
 n del. M<sup>x</sup>  
 160 limus) limis M  
 162 umor) umor M h(umor) M<sup>2</sup>  
 165 emersere) aut emersere  
aut einersere M  
 173 ni librato) ninbrato M  
 (ni) li(brato) M<sup>1?</sup>  
 175 occasum et) occasu(m) M  
 176 lunaue) lunane M  
 lunaue M<sup>2</sup>
- 179 imo) uno aut imo M  
 suspensa) suspsa aut  
 susp(er)sa M suspensa M<sup>2</sup>  
in marg.  
 183 credere) crebere M  
 credere M<sup>x</sup>  
 185 signis) sig<sup>?</sup>uis M  
 186 Phoebus eat) foeb(er)<sup>?</sup>ea  
 M, cui t add. M<sup>1</sup> bus eat M<sup>2</sup>  
in marg.  
 191 nunc) hunc M  
 193 occasumue) occasum ne M  
 194 natura admiranda) natura  
 uideri admiranda M. uideri del  
 M<sup>x</sup>  
 196 in nullo) iminllo ? M  
 197 motu cursu) motus cursus  
 M motu cursu M<sup>x</sup>  
 199 seruet) seru<sup>?</sup>t M  
 201 imitata) mutata M  
 203 e) et M  
 207 teretis) tereus<sup>?</sup> M. del  
 M<sup>2?</sup> teretes M<sup>2</sup> in marg.  
 esse) isse M. corr. M<sup>1</sup>  
 212 finis) fines M. corr. M<sup>1</sup>  
 216 Canopon) canopō M

- v add. M<sup>2</sup>
- 217 ad Heliacas) adeiacas M  
niliacas M<sup>2</sup> in marg.
- 224 gentes) g's M. del.M<sup>2</sup>  
gentes M<sup>2</sup>
- 225 terrae) g's M. del M<sup>2</sup>  
gentes M<sup>2</sup>
- 227 quatiuntur) quatinūt<sup>??</sup>(ur)M
- 228 plana) plena M  
foret) forent M
- semel) semel et M et del.M<sup>x</sup>
- 233 decliua) dediua M  
corr. M<sup>1?</sup>
- 236 gentes) g's M
- 237 ad Arctos) adortos M  
(ad) arctos M<sup>2</sup>
- 239 uidetur) uidetus M  
corr. M<sup>2?</sup>
- 242 aspicit) aspīc<sup>?</sup>(it) M
- 243 excitat) exitat M  
corr. M<sup>2</sup>
- urbes) orbes M corr. M<sup>2</sup>
- 246 pontus) potus M corr. M<sup>2</sup>
- distinguit) distinguet M  
corr. M<sup>2</sup>
- 251 tacita) tacta M. corr.M<sup>2</sup>
- 253 mutuaque) multa q(uod) M  
et (multa) M<sup>2</sup> in marg.
- 264 respicit) p<sup>?</sup>(<sup>??</sup>er)spicit M
- 265 uocantem) nocentem M
- 269 contento) contento arcu M  
arcu del. M<sup>x</sup>
- 272 urna) urūa<sup>?</sup> M
- 276 omnia) omina ? M
- 280 diuerso) diueso M, corr. M<sup>x</sup>
- 282 at) art M. corr. M<sup>1?</sup>
- 285 e) et M. corr. M<sup>x</sup>
- 294 notissima) nouissima M  
notissima M<sup>2</sup> in marg.
- 301 auctor) auctōr<sup>?</sup> M
- 305 has) Nas M corr. M<sup>2</sup>
- 306 a sedibus) asdibus M  
corr. M<sup>2</sup> in marg.
- 308 sidera) sylliera<sup>??</sup> M corr. in  
sydera M<sup>1</sup>
- 309 nitentia) nicencia ? M  
corr. in lucencia M<sup>1?</sup>
- 310 uiribus) uil uiribus M  
uil<sup>?</sup> del. M<sup>1</sup>
- 310 uicina) uicena M corr. M<sup>1?</sup>
- poli caelique hinc) caeli  
huīc<sup>??</sup> M. solo hi(n)c celi M<sup>2</sup>

- in marg. del.M<sup>2</sup>. poli  
 celiq(ue) hinc M<sup>2</sup>in marg  
 314 borean) boreā M  
 rigentem) rege(n)te(m) M  
 316 nitet Arctophylax)  
 nitet arctophilax M  
 arctophilax nitet M<sup>2</sup>  
 321 fronte) frunte M  
 fronte M<sup>2</sup> in marg.  
 326 attigerat) actigerat M  
 332 cigentem) ingentem M  
 cingentem M<sup>2</sup> in marg.  
 339 in niueum) inimicum M  
 in mutu(m) (ue)1 in niueum  
 M<sup>2</sup> in marg. delM<sup>2</sup> niuem<sup>u</sup>  
 M<sup>2</sup> in marg.  
 340 plumea) plurima M.corr.M<sup>2</sup>  
 347 Oceani) occani ? M  
corr.ad (occ)e(ani)M<sup>2</sup>?  
 351 eripit) et ripit M  
 352 dispas) dispas M. dispar  
 M<sup>2</sup> in marg.  
 353 conspicitur) conspi<sup>?</sup>atur  
 M. ? in ras.  
 deltoton) de: toto M.1 in ras  
 354 Cassiepia) casieppa M
- 402 excēlso) exelso M  
 405 refert) recert M  
 refert M<sup>1</sup>  
 417 et) te ? M. del M<sup>x</sup>  
 et ? M<sup>x</sup>  
 418 post crater ???? M<sup>2</sup>  
litteris minutis  
 420 uictrixque) uictrixque  
 M. inutrisq(ue) M<sup>2</sup> in marg.  
 423 eguit Ioue) esurcione M  
 extrud(ere) M<sup>2</sup> in marg.  
 426 adgestos) adgressos M  
 (a)g(gressos) M<sup>2</sup> s.script.  
 429 corpora) corpore M. e  
in ras.(corpor)a M<sup>1</sup>? s.scr.  
 430 quemquam) quā<sup>?</sup>(m)qua(m)  
 M.corr in (qua)<sup>?</sup>(m)quam) M<sup>1</sup>?  
 431 tunc Iuppiter Arae)  
 orauit et are M.del. M<sup>x</sup>  
 ????  
 suis tunc Iuppiter axe M<sup>2</sup>  
in marg.  
 433 Cetos) coept<sup>?</sup>s M  
 p del. M<sup>x</sup>  
 squamea) squasmea M. corr. M<sup>x</sup>  
 435 intentans) in<sup>?</sup>tatans aut  
 in<sup>?</sup>ta(n)tans M.corr. in

intae(n)tans M <sup>1?</sup>	464 oneri) oneris M. <u>corr.</u> M <sup>x</sup>
similem) similem M	disiungere) disiungeret M
(simil)is M <sup>2</sup>	<u>corr.</u> M <sup>x</sup>
441 coniungit) c(on)inūgit M	tantum) tautum M, tantum M <sup>2</sup>
355 Andromedan) andromedā M	470 lumina) lumina M. luna M <sup>2</sup>
362 Heniochus) Eniochus M	481 laxius) partib(us) M
365 haedi) haedi cludai M	laxius M <sup>2</sup> <u>in marg.</u>
cludai <u>del.</u> M <sup>1</sup>	495 at cur) a dcur M
371 Hyades) ūades M	<u>corr.</u> M <sup>2</sup> <u>in marg.</u>
y(ades) M <sup>2</sup> <u>s.script.</u>	496 praescriptos) praescriptos
372 scandunt) scendunt M	M praescripto M <sup>x</sup>
<u>corr.</u> M <sup>x</sup>	498 aestiuas) aestinas M
375 sidus et) siciubet M	aestiuas M <sup>2?</sup>
sidus (et) M <sup>2</sup> <u>in marg.</u>	noctis) noctes M
381 caelo spectantia)	499 eadem) ed? eadem M
celos pectancia M. <u>corr.</u> M <sup>2?</sup>	ed? <u>del.</u> M <sup>1?</sup>
391 demissus) dimissus M	501 Graiae uerterunt) graia
ensis) eūsis M	euerteru(n)t M. Graiae M <sup>2</sup> <u>s.s.</u>
393 at caput) adcaput M	Pergama) per magna M.per
excelso) exesso M	(mag)a(na) M <sup>1?</sup> <u>del.</u> M <sup>2</sup>
398 horrida) orrida M	pergama M <sup>2</sup> <u>in marg.</u>
446 notia) nocia M	502 Arctos) arct? s M. arctos M <sup>1</sup>
(n)ocua M <sup>2</sup> <u>in marg.</u>	506 deprendere) dep(re)hendere
456 magno) nago <u>aut</u> magno M	M
459 ut) aut M ut M <sup>1?</sup>	508 quot) quod M
462 omnia) omnia <u>aut</u> omina M	509 quot) quod M

- 512 Graecia) gracia M  
 (gra)e(cia) M<sup>2</sup> s.scr.
- 516 terrae uertentibus annis)  
 terra euertentib(us) annos M
- 517 exutas uariam faciem)  
 Iunaria(m) exuta(m) facie(m)  
 M (E)xūtas uaria(m) ?  
 facie(m) M<sup>2</sup> in marg.
- 518 at manet) a dmanet M  
 at M<sup>2</sup> in marg.
- 519 quem) que M
- 567 caeli) aceli M
- 581 fila) filia M  
 fila M<sup>2</sup> in marg.
- 586 luce) lōce M
- 587 candentem) cadentem M  
 ((ca)n(dentem) M<sup>1</sup>) ?
- 590 austrinas) astrinu M  
 austrinus M<sup>2</sup>
- 591 hic) huic M
- 592 a nostro) anro M. corr M<sup>2</sup>
- 595 summa) sum(m)a(m) M
- 596 quinque) quinque aut  
 qumque M
- 597 his eadem) huscade(m) M  
 his eadem M<sup>2</sup> in marg.
- 599 quidem) uid<sup>?</sup>iem M corr. M<sup>2</sup>
- 601 seruantes ) seruantis M
- 603 sunt) sunt ? M  
 recipit) recipit(??) M
- uertice uertex) uertite  
 uertice M (uertice) uertex M<sup>2</sup>  
in marg. cardo ? et celi ?  
 M<sup>2</sup> in marg.
- 606 rectum) rerti<sup>?</sup> M rerto<sup>?</sup> M<sup>1</sup>  
 ??  
 rēctum M<sup>2</sup> in marg.
- 545 quacumque) quarū<sup>?</sup>que M
- 547 solidam) sod solidam M  
 sod del. M<sup>1</sup>?
- 551 signis) ignis M
- 558 generis) gener M  
 (gener)s M<sup>2</sup>
- 563 derigitur) dirigitur M
- 614 squamosa) i(n)qua mosa M
- 615 lanigeri) langeri M
- 616 sinus imos) sinu si mos  
 M. corr. M<sup>2</sup>?
- 619 transit et) pectus M  
 transit et M<sup>2</sup>
- 620 remoto) rē<sup>??</sup>moto M
- 621 lumina) lumilia ? M
- 623 canem) canu(m) M

- 625 de limite) dilimite M  
627 currens spirasque)  
currensque spiras M. corr. M<sup>2?</sup>  
629 transuersam) transuersa M  
636 spatiis) patiis M. corr. M<sup>2?</sup>  
637 eos) edos M((e)o(os)  
M<sup>2?</sup>) ?  
640 diuiso) di<sup>?</sup>niso M  
culmine) culminat M  
642 et tempora) tempora M  
643 ab undis) abundus M  
646 ac summam) acsuma(m) M  
sextam om. M add. M<sup>2</sup> in marg.  
utramque) utroque M, utraque M<sup>2</sup>  
650 quidquid) quidq(ue?) M  
658 oras) horas M  
665 titulum) titulum M  
horizon) orison M  
666 adice) adite M  
676 deuexo) denexo M  
679 sed nitet) sednit et M  
corr. M<sup>2?</sup>  
balteus) baltheus M  
681 trecentas) tric<sup>?</sup>entas M  
684 arctos) artos M  
685 gyro sua) girosua M  
giro sua M<sup>2?</sup>  
686 transitque inuersae per  
sidera Cassiepieae) transiq(ue)  
immersae p(er) sydera Cassioe  
pie M  
689 aequantem gyrum)  
equantigiru(m) M equante(m)  
giru(m) M<sup>2?</sup>  
690 equos) equis M  
692 sinuat) sumat M  
694 argium) argunē M  
(arg)uūm M<sup>2</sup> s. script.  
aplustria) amplust(ri)a M  
696 unde) nūde M  
697 Cassiepia petens)  
casiq(ue) pia M  
casiopeia petens M<sup>2?</sup>  
699 secat) secant M  
700 praeciditur)  
preciclit(ur) M  
704 missura diem) missu  
radiem M  
706 diuisas) diuisis M  
709 undis) nūdis M  
710 mouit) nouit M  
713 nubila) nubilat M

Iris) hiris M	740 recentem) <sup>?</sup> iegentem M
719 compagine rimae)	742 natu) natu M nutu M <sup>2?</sup>
compagine rime M	743 curuis) riuis M curuis M <sup>2</sup>
compage carine ? M <sup>2</sup>	744 saeuisse) <sup>?</sup> sciuisse M
720 admittant) admittant	seuisse M <sup>2</sup>
<u>aut</u> adimttant M	747 luit ipse) ut ipse M
721 uulnera) iulne <sup>c</sup> a M	luit ipsa M <sup>2</sup>
722 conspiciant)	748 noua) nona M
conspiceantq(ue) M	752 diuum) di <sup>?</sup> nu(m) M
723 cauernae) ca <sup>?</sup> uerne M	diuum M <sup>2</sup> <u>in marg.</u>
726 fusuram) fusuram M	753 suo) suos M. <u>corr.</u> M <sup>2</sup>
fixuram M <sup>2</sup>	quapropter) qu <sup>?</sup> ap(ro)pter M
727 uersus) <sup>?</sup> nersus M	qua( <sup>m</sup> )p(ro)pter M <sup>2?</sup>
728 alti) alti <sup>q</sup> (ue) M	756 candet) candor M candet M <sup>2?</sup>
730 illac) illa M illac M <sup>2?</sup>	758 caelo) caelo M celo M <sup>2</sup>
diuersis) diuersibus M	760 huc) huc M (hoc M <sup>2</sup> ) ?
bus <u>del.</u> M <sup>x</sup>	migrant ex) migrante M
733 caeruleam) cerulea M	mi grant ex M <sup>2</sup>
mutasse) mutasq(ue) M	761 aetherios) aethersos M
mutasse M <sup>2</sup>	aether(i)os M <sup>2</sup>
colore) colore(m) M	fruuntur) ferunt(ur) M
735 ab annis) ab <sup>??</sup> iniis M	(ue)l fruu(n)t(ur) M <sup>2</sup> <u>in marg.</u>
736 Phaethontem)phetontem M	763 ferum) ferunt M. <u>corr.</u> M <sup>2</sup>
737 propius) pp <sup>r</sup> us M	764 Ithacum) mithacum M
739 parente) patente M	mit <u>del.</u> M <sup>2</sup>
parente M <sup>2</sup>	765 danaum) danau(m) <u>aut</u>

clanau(m) M	proles) plures M. pubes M <sup>2</sup>
766 uictam)meta(m) M <u>corr</u> M <sup>2</sup>	uel proles M <sup>2</sup> <u>in marg.</u> <u>del</u> M <sup>2</sup>
767 nigrum) iugu(m)u ? M	779 Scaeuola) scellola M
nigrum M <sup>2</sup> <u>in marg.</u>	sceuola M <sup>2</sup>
partum) parti M <u>corr.</u> M <sup>2</sup>	781 quae texit) quaet'x M
769 praeteream) prerea(m) M	782 uolucris) uolucris M
preterea(m) M <sup>2</sup>	uolucr(i)s M <sup>2</sup>
770 Pella) pella M bella M <sup>2</sup>	784 Ioue qui) ione q(ue) M
771 strictae pondera)	camillus) cauillis M <sup>2</sup>
stricta spondere M	camillus M <sup>2</sup>
strictas pondere M <sup>2</sup>	786 Papirius) papircus M
772 habuere) habuere M	papirius M <sup>2</sup>
(habe(re) M <sup>2</sup> ) ?	787 Curius) turins ? M
773 Lycurgus) ligurgus M	tertia) terra <sup>?</sup> M
774 aetherius) aetherias M	788 Cossusque) cossu M
aetherius M <sup>2</sup>	792 unum) unu(m) ? M
776 uictor) metor M	793 Pompeius) Pompeius <sup>?</sup> M
strarat quae) straraton M	domitor) domtor M
strauit qui M <sup>2</sup>	per tris) petris M <u>corr.</u> M <sup>2</sup>
777 uiri quorum) uir <sup>?</sup> quorum	810 carmine) carmina M
M uir iquorum M <sup>1</sup>	817 ingenitum) ingentum M
uirj quorum M <sup>2</sup>	821 alimenta) alinienta ? M
778 tarquinio) ter quino M	822 deprendit flamma)
ter quinio M <sup>2</sup>	depraehendit flama M
horatia) horatiu <sup>?</sup> M	824 simillima) similina M
horatia M <sup>2</sup>	fumo) funo <u>aut</u> fimo M

825 in breue uiuit) inbreue <sup>?</sup> ninit M	873 saepe nitent) se penitent M
826 subsistunt) subsistant M	875 incendia) n <sup>?</sup> icendia M
827 ortus) ortis M	876 futtilibus) fu <sup>?</sup> itilibus M
828 parua) praua M	ignibus) ignis M
accensis) accessis M	879 frustrata iuencos) frustata imientos ? M
829 dies) diesq(ue) M (que del. M <sup>x</sup> ) ?	884 Erectheos) erectecos M
rediret) reditq(ue) M	906 etiam) et na(m) M
830 inmersum) inne(n)sum M	907 significant) signifitant M
deprenderet) deprehenderet M	911 artus) ari M
831 tum) tunc M	912 conflixit) cu(m) fluxit M
832 aridior) arridior M	913 perque) per quod M
841 teretemue columnam) terece(m)ne colu(m)ma(m) M	914 actia) acia M
842 tumidis) timidis ? M	918 Isiaco certarunt) isia cocertarunt M
854 Aetnam) ethna(m) M	sistro) sisto M
859 subitas erumpere) subita se ra(m)pere M	920 armis) ar <sup>??</sup> uis M
860 coruscis) choruscis M	imitatus) imitatur M
863 uibrantia lumen) uibrantia lumen <sup>?</sup> M	921 Pompeius) pomp <sup>?</sup> ens M
865 praebentis semina) prouentis semine M	cepit) mepit M
869 Titanius) titani <sup>?</sup> ns M	923 discordia) disc <sup>?</sup> ordia M
871 Cyllenius) cillen <sup>?</sup> ius M	catenis) cathenis M

The Production and applications of a computer generated  
concordance to Manilius.

The emphasis of my research is towards the field of textual criticism. Clearly, in trying to recover what Manilius wrote, a complete knowledge of his vocabulary, syntax and style is desirable. Hence I have produced a computer generated concordance to the Astronomica.

A word index to the Astronomica was produced by Dufay and included at the end of his text and commentary (Paris, 1679), But this index is very faulty, for it abounds in false references, omissions and typographical errors.

I have examined 100 references in Dufay's index, taken at random: the words acer to acutis (comprising 37 references), duodena to duxit (32) and pulsa to Pyrrhi (31). I checked these entries with Dufay's text and then with the computer generated concordance. I discovered three mis-spellings, eleven false references and nine omissions.

The word puppes (4.275) is spelt puppos. Pupnisque (4.567) is spelt pupisque. But puppos is entered before puppibus and pupisque after puppis. Hence they must both be merely typographical errors. Duplave is spelt dupleve.

Eight of the false references (acer 5.695 instead of 5.697, acies 5.663 instead of 5.665, acquirere 5.500 instead of 502, duras 5.548 instead of 5.550, duri 5.619 instead of 5.621, duxit 5.566 instead of 5.568, putris 5.671 instead of 5.673,

pyropo 5.709 instead of 711) are the result of a single cause. Line 5.499 in Dufay's text reads uerum ubi Cassiope, bis denis partibus actis. Dufay has no entries for the words uerum ubi Cassiope. The words bis denis partibus actis are all entered with the correct references. All the words of line 500 are entered, but all are said to be found in 5.498. This false numeration persists until the end of the poem.

There are three other false references: Pulsa 1.98 instead of 1.99, acta 2.140 instead of 2.649 and duplicem 3.493 instead of 3.177

I have detected nine omissions in this sample: acuit 1.79, actis 5.464 and duplici 1.21, 408, 593/2. 187, 622, 659/4.738.

Even if Dufay's index were an accurate index to his own text, a new index would still be required, for Dufay's text is far inferior to Housman's, the best available now.

Another index to the Astronomica was included at the end of the Teubner text of Jakob Van Wageningen (1915). I have not seen Van Wageningen's text or index, but I gather from Housman's addenda to 4.719 ("ceterum Wageningenus genus retinens Gradium interpretatus "suum", quod nomen non pudore in indice omisit sed tyothetae mendo apud Fayum deceptus") that Van Wageningen compiled his index by comparing the entry in Dufay's index with his own text at that point and whenever his text differed from Dufay's, he deleted the entry from Dufay's text and substituted one based

on his own text. His index is thus as incomplete as Dufay's. Housman also states that Van Wageningen's index "is almost as full of errors as the apparatus criticus". (Vol.5,p xxvii).

Since Dufay's and Van Wageningen's indexes are unsatisfactory, I have produced my own, with the aid of a computer. The program for generating the concordance was written by Mr. J. Winings of the Adolph Basser Computing Dept. in the Sydney University School of Physics. The print-out lists every word in the text of Housman's editio minor in alphabetical order and gives each occurrence of each word in the order of its occurrence in the poem. After each entry the whole line in which it occurs, together with its book and line number, is printed.

Due to the care and skill with which the cards were punched (I checked through them all and detected only one error: milliter, not molliter, was printed as the first word of 5.555) the print-out proved far superior to anything that could have been achieved by hand without the expenditure of an enormous amount of time and effort. Scholars who have tried to compile indexes and concordances by hand have been beset by error in every stage of their work. An index to Cicero's letters was brought out by the American scholars Oldfather, Canter and Abbot in 1938. On page three of their preface they remark: "Something like 40% of all the original entries in the first draft...had to be corrected in at least some detail". An index to Cicero's rhetorical works, started by the same editors about the same time, did not see the

light until 1964, when only one of them - Abbot - was still alive. Many years were spent on the project. Nevertheless, many errors persisted even to the proof stage. Abbot comments in the addendum to his preface that "It was only when the work was in proof that with growing dismay I came to realize not only the accident of pages from the original missing...and the loss of original cards... but, worse than that, the extraordinary insouciance with which the original collection must have been made".

The form of the computer print-out makes reference to every occurrence of every word very easy. Hand produced concordances, as for example Lane Cooper's concordance to the poems of Horace, often have a reasonably clear lay-out, but none have a lay-out as clear as this.

There is some disadvantage in printing only one line of context for each occurrence of each word - that the context may extend beyond the line in which the word occurs. But in Manilius' poem a line of verse usually contains a unit of sense. Thus the line of occurrence of a word usually provides sufficient context.

Printing one line of context has a great advantage. One can see at a glance the position of the same word in different lines. Certain words have a strong tendency to come in particular parts of a verse. For example, in eight of the nine verses of Manilius' poem in which it occurs, the word an comes first. The one verse in which it does not come first (3.317) was proved by Bentley to be spurious. It gives, in bad Latin, information

implicitly contained in the immediately preceding lines - a fact the interpolator was too stupid to realize.

Many verses of Manilius' poem have the same or similar endings. The print-out lists these similar endings either right under or close to each other, enabling one to detect them easily. Such a print-out would have saved Herman Kleingunther, who listed on pp 47-54 of his Quaestiones ad Astronomicon libros...pertinentes all the similar endings he could find in the poem, many week's work and would have enabled him to give a full list, instead of the incomplete list he does give. I have read a few entries in the computer concordance in order to check the completeness of his lists and have discovered the following omissions: animalia terris (2.99), animalia terras (5.708), cardine mundi 1.605, 2.868, cardine mundum 1.280, 2.939, 3.623, cardine quoque 2,808 cardine quoquam 2,841, cardine primo 3,505, cardine primum 3,603, atque ferarum 2,156, 528, 777. Note that I am quoting according to Bechert's text, the text used by Kleingunther.

I intend to use the computer print-out as a help in the production of a Lexicon to Manilius, which I hope to publish. I feel that a Lexicon, ordering references according to meaning, and including variant readings and conjectures of merit, but too uncertain to include in a text, would be of more value than the print-out in its present form to students of Manilius and of Latin in general.

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How many Books did the Astronomica originally consist of?

There are five books of Manilius' Astronomica extant, but I believe it originally contained eight, and that the book now known as Book 5 was not the original Book 5.

The colopha to the Books of the Astronomica in GLM are as follows: To Book 1: M. Manili astronomicon liber primus explicit incipit secundus in M, two blank lines in G and three in L. To Book 2: M. Manlii Boeiii astronomicon liber 11 explicit feliciter incipit tertius in M, explicit liber secundus. Praefatio libri tertii in G, one blank line in L. To Book 3: M. Milnili astronomicon liber 111 explicit incipit 1111 in M, finis liber tertius incipit quartus in G, two blank lines in L. To Book 4: explicit liber 11 incipit liber 111 in M, finis liber quartus sequitur quintus in G, eighteen blank lines in L.

It is clear from them that the poet's name is Marcus Manilius and that the colopha which existed in the archetype have been transmitted to M but not to G & L, the manuscripts of the other family. The colopha in G have no authority. Hence, since the colophon to book 4 in M reads explicit liber 11 incipit liber 111 there is no evidence that the book now known as book 5 was in fact the original Book 5. On the contrary, the evidence of the colophon suggests it was not, for whatever 11 and 111 are corruptions of, they are not likely to be corruptions of 1111 (or 1U) and U.

There is also internal evidence that the Astronomica originally contained more than five books. Verses 3.268-70, verses describing the planets, are misplaced in the manuscripts, and there is no suitable place for them in the extant books. They evidently belong to a lost book.

There is also evidence that a book or books are lost between Book 4 and the book now called Book 5. I print below the first nine lines of "Book 5". The apparatus criticus records my divergences from Housman's text.

Hic alius finisset iter signisque relatis  
 quis aduersa meant stellarum numina quinque  
 quadriiugis et Phoebus equis et Delia bigis  
 non ultra struxisset opus, caeloque redisset.

[ac per descensum medios percurreret ignes 5  
 Saturni, Iouis et Martis Solisque, sub illis  
 post Venerem et Maia natum te, Luna, uagantem.]

Me properare tamen mundus iubet omnia circum 9  
 sidera uectatum toto decurrere caelo.

4 redisset Gain, rediret GLM.

Lines 5, 6 and 7 were deleted as spurious by Bentley.

8 tamen Gain, uiam GLM, etiam Housman.

The general sense of the passage is clear: "I have completed what I have set out to write. Another poet would have been satisfied to do that. I, however, being the mundi uates (2.142) am required by the mundus to write an epilogue, detailing the

astrological effects of the non-zodiacal constellations".

Manilius' design included writing about the astrological effects of the planets. In 2.965 and 3.156-9 he promises to treat them and in 2.750 and 3.587-9 to treat of the combined effect of stars and planets. Yet Books 1-4 have only passing references to the planets. The systematic treatment of them he promises, and in 5.1-9, in stating that he has completed his design, states that he has given, is found in none of them. It follows that Manilius must have written before "Book 5" books now lost, containing the treatment of the planets he promised.

In isolation, 5.1-3 are capable of two interpretations:

- 1) I have treated the zodiacal constellations (signs)
- 2) I have treated the signs and the planets.

It is clear that (2) is the correct interpretation, for Manilius' design included a treatment of the planets.

In line 4 Manilius wrote redisset, not rediret. How could a poet, when he had written his last book (finisset iter, 1) be still continuing his journey in the heavens (caeloque rediret), in other words be writing another book?

Lines 5-7 are spurious. How could a poet who had written his last book then write another book about the planets? I believe 5-7 were interpolated by a man who thought too little importance was being given to the planets, which students of astrology other than Manilius generally regarded as more important than the fixed stars. He wrote them after the loss of books between 4 and "5"

and so did not realize that Manilius had already treated of the planets. In order to fit in his lines he changed redisset to rediret. Not only do lines 5-7 contradict finisset iter, they also repeat 2-3 awkwardly and are far below Manilius' usual standard of versification and sentence structure. Nec numeris nec oratione commendabiles is Housman's verdict on them.

The manuscript uiam in line 8 is impossible, as shown by Housman: "non properat uiam qui, cum...ad terram redire possit, omnia sidera circumuectari mauult et toto caelo decurrere". I agree with Bentley and Housman that the asyndeton between properare and decurrere found in the manuscript text is also impossible. This asyndeton is removed by removing uiam. Viam being removed, decurrere is then free to be construed as the object of properare in its place. When lines 5-7 have been rejected, it becomes clear, I feel, that the word uiam has displaced is not etiam, as Housman conjectured, but tamen. The contrast is between what another poet would have done and what Manilius is doing. Hic alius finisset iter (1), me...tamen.

There is further evidence that Manilius' poem originally consisted of more than five books. Gerbert (c 940-1003), from 999 to 1003 Pope, as Sylvester 2nd, wrote from Bobbio on June 22nd 983 to Archbishop Adalberon of Rheims (letter 8 in Havet, Les Lettres de Gerbert, Paris, 1889) telling him (among other things) that he would send him uiii uolumina Boetii de astrologia. On September 7th 988 he wrote from Rheims to the monk Rainard of

Bobbio (Havet, letter 130): Nosti quot scriptores ("copyists")  
in urbibus ac in agris Italiae passim habeantur. Age ergo et te  
solo conscio ex tuis sumptibus fac ut mihi scribantur M. Manilius  
de astrologia, Victorius de rhetorica, Demosthenis Optalmicus.

I believe that in the first letter as well as the second Gerbert is referring to the Astronomica of Marcus Manilius, called Marcus Manilius Boetius in the colopha to book 2 in the manuscripts Gerbert had access to (M. Manilii Boetii seems to be the original of the corrupt M. Manlii Boeiii in the colophon to Book 2 in M).

A theory has been advanced that uiii uolumina Boetii de astrologia refers to a lost work by Boethius on astronomy. But, except for an entry in a tenth century Bobbio Library catalogue: libros Boetii 111 de aritmetica et alterum de astronomia (Muratorio, Vol.3.820D), which could easily refer to the work of M. Manilius Boetius, there is no evidence that such a work ever existed. If a man so highly regarded as Boethius wrote one, why is it not mentioned in any author? (evidence that it is mentioned in Cass. Variae 1.45.4 is rightly rejected by Stahl, Roman Science, University of Wisconsin Press, 1962, pp 196-7 and 202).

If what I have expounded is correct (I hope to support it by further evidence when I have access to a better library than that of Sydney University), Manilius' poem contained originally eight books, and the Book now known as Book 5, was not the original Book 5, but books discussing the planets have been lost between Books four and "five".

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### The Translation.

The translation of the Astronomica I have made is based on Housman's editio maior. Whenever I translate a different text, I print that text in a footnote.

The differences from Housman's editio maior are of three kinds:

- (1) Changes, resulting from a change of opinion, made by Housman himself in his editio minor. Where I am following the text of the editio minor, not the editio maior, I note the fact.
- (2) Emendations suggested by Housman in his commentary but not included in his text.
- (3) Other emendations, chiefly my own. I defend these in the notes following the translation.

I have made these changes wherever I believe the text of Housman's editio maior has no meaning. The emendation is intended to give the sense, not necessarily the exact words, of the original.

I am very grateful to Dr. Jocelyn for reading a rough draft of the whole translation and the notes on Book 1, correcting several errors and suggesting many improvements.

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In my poem I am striving to bring down from the heavens  
 an art of divine origin, which is concerned with the stars, a  
 work of heavenly reason, foreknowers of fate, which vary and make  
 diverse men's lots. I am the first to stir the trees of Helicon,  
 which sway with verdant crests, with this theme, as yet new to  
 her. I bear her sacred presents, the theme of no previous poet's 5  
 work. You, Caesar, father and leader of our native city, ruler of  
 a world that obeys your divinely sanctioned laws, are the one who  
 gives me the courage and supplies the strength to sing on so great 10  
 a theme. Now the universe shows greater favour to those who study  
 it and desires to reveal its celestial riches through my  
 poem. There is leisure for this only in time of peace<sup>(1)</sup>. It is  
 my delight to travel through the air and live, free roaming, in  
 the boundless heavens, and to learn of the constellations and the  
 planets which travel in an opposite direction to them. But merely 15  
 to know this is too little. Far more is it my delight to under-  
 stand completely the inmost nature of the great universe and to  
 perceive how it brings to birth and controls the lives of living  
 creatures with its signs and to set this knowledge to metre, under  
 the guidance of Phoebus. Two altars, with flames upon them, shine 20  
 for me. At two temples I pray, surrounded by a twofold blaze -  
 the temple of poetry and that of nature. Not only do I use fixed

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(1) 13 Reading uocat tantum. (so Housman in his editio minor)

In his editio maior he reads uocat. tandem

metrical patterns, but the immense universe revolving noisily about me, its poet, scarcely allows the words of ordinary unmetrical speech to be arranged in periodic prose.

It was by gift of the dwellers in heaven that men on earth were first permitted to know its inmost nature.<sup>(1)</sup> For who could have stolen, unknown to them, knowledge of the universe by which all things are ruled, if they had been concealing it? Who would, with his mere mortal mind, have undertaken (desiring to seem a god himself, though the gods were unwilling) to reveal the ways on high and those beneath the horizon and the constellations, each keeping within its own bounds throughout the void? You are the fountain head and patron of so sacred a science, Cyllenian Mercury. It is through you that the inmost nature of the heavens and the stars was discovered, the names and the courses of the constellations, their effects and their influences, so that the universe became more highly regarded, and not only was its appearance revered, but also its power over things and the races of men perceived the greatest of God's attributes. Nature herself showed powers and revealed herself, deigning first to inspire the minds of kings, who occupied positions so exalted and nearest to the heights of heaven and tamed fierce races in the region of the rising sun [races whom the Euphrates cleaves and into whom the Nile inundates] where the day sky returns and speeds over black

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(1) Reading interius (so Housman in his editio minor) In his editio maior he reads ulterius.

lands. Priests chosen to make offerings for the welfare of the state, who looked after temples and performed sacred ceremonies all their life, by their service bound God. The immediacy of his powerful divine influence fired their already holy minds and God brought them to a knowledge of God and revealed himself to his servants. They established this noble science, and through their skill were the first to see that men's fates depend on the planets. For they recorded every period of time, together with what happened in each, embracing the life span of generations in their never ending diligence, recording what birthday and what kind of life each man had, what laws of fortune each hour brought and the greatest differences the smallest movements made. After every arrangement of the planets in the sky had been observed, as the planets returned each to the place from which it started, and each arrangement of the planets had been assigned its own influence in accordance with the fixed laws of fate, men, gaining experience through different observations, founded the science, the example of predecessors showing the way, and by long observation discovered that the planets dominate by their unspoken laws and that the whole universe is kept in motion by an eternal intelligent being and the changes of fate can be detected from definite signs.

Before them men were ignorant, without the power of penetration, looking only at the outward appearance of things and not knowing the reasons for phenomena. In wonder they gazed at the light of the sky, strange to them, now grieving as if they

had lost it forever, now joyful as if it had been born anew<sup>(1)</sup>.

<They were unable to discover why Phoebus returns so often and  
 puts the stars to flight> <sup>(2)</sup> or the true causes of the different 70  
 length of day, of the inconstant length of night and of the  
 different shadows cast according as the sun had retired further  
 away or approached nearer. Brilliant men had not yet discovered  
 the skilled arts, and the earth lay unproductive in the hands of  
 its unskilled inhabitants. Gold lay in untouched mountains, the 75  
 untouched sea hid new worlds, nor did men dare trust their life  
 to the main or their wishes to the winds. Everyone thought he  
 knew enough. But when a long period of time had sharpened men's  
 wits, toil had given ability to the wretches and fortune by  
 weighing hard upon them bade each to watch his own interests,  
 they were lead into different concerns and strove in rivalry  
 with each other and whatever they discovered through skilful  
 experimentation, they brought out and contributed to the common  
 good. Then the laws of language were imposed on babbling tongues, 85  
 the wild countryside was sown with various crops and a roaming  
 sailor penetrated into the sea hitherto unseen and a small boat  
 traded between lands hitherto unknown to each other. Then men of  
 ancient time discovered the arts of war and peace, for practice  
 ever causes new skills to be born from old. Not to mention skills 90

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(1) 69 Reading amisso...renato. Housman reads amissis,renatis.

(2) After 69 I have marked a lacuna, inserting exempli gratia  
 the line nec totiens Phoebum redeuntem mane fugatis.

commonly possessed, men learnt how to understand the language of birds, to consult entrails, burst snakes with incantations, disturb shades, move the depths of Acheron and turn day into night and night into day. Men, already skilled, and ready to learn more, overcame every difficulty by their efforts. Reason did not put a finishing hand to their discoveries until it had ascended to the heavens and gained a profound understanding of the nature of things through their causes and saw what is everywhere. 95

Through reason men discovered why the clouds strike together and shatter with such a crash, why winter snow is softer than summer hail, why some lands blaze and the solid orb trembles, why rain showers rush down and what cause moves the winds. They freed their minds from wonder at the world, taking from Juppiter his thunderbolt and power of thundering, rightly attributing the sound to the winds, the fire to the clouds. After men had allotted each of these its proper cause and thus treated the atmosphere, they directed their attention to learning of the vast celestial machine and understanding the entire heavens. They gave their own proper shapes and names to the constellations, marking their courses according to their fixed law and perceiving how everything is governed by the arrangement of the divine universe, the planets by their differing order changing men's destinies. 100 105 110

It is through my efforts that this theme takes its shape, for it has been enshrined in no poem before mine. May good fortune favour my great undertaking and my life reach an old age ripe and full of years, so that I may rise above such a mass 115

of material and treat the large with as much care as the small.

Since it is from the heights of heaven that my poem and knowledge of the established order of fate is coming to the earth, I must first sing of the shape of nature and describe the appearance of the whole universe. One theory holds that it does not derive its basic constituents from anything and lacks also a birthday, but has ever existed and will ever exist, equally without beginning or end, another, that chaos once separated and gave birth to the mingled first beginnings of things, and darkness, having given birth to the gleaming world, fled, driven into the gloom of the underworld, another, that nature consists of indivisible elements and is destined after countless ages to dissolve and return into the same and that in sum nature consists of almost nothing, and will continue to consist of almost nothing and that invisible matter has made the sky and the earth. A further theory holds that fire and darting flames have constructed this machine and formed the eyes of the universe and dwell through its whole body and fashion shimmering thunderbolts in the sky, another that water, without which the matter from which things arise is dry and hard and which devours the very fire by which it is dissolved, has begotten it. A further theory holds that neither earth, fire, air or water knows a father, but that they form the four members of the divine universe and have constructed the globe of the universe, and that they forbid one to seek anything beyond them, since they have created everything by them-

selves and cold and warm, wet and dry, gaseous and solid elements are mingled, forming this concordant discord, which fashions suitable bonds and this generating whole and renders the elements capable of producing everything. Which theory is correct will ever be a matter of dispute among men of talent and will remain doubtful, because it is hidden and so much above the understanding of either man or god. But whatever the origin of the universe, men agree about its appearance. Matter was arranged in a definite order. Fire lifted itself up swiftly to the edge of the atmosphere and embracing the topmost heights of the starry sky, formed the walls of nature with its rampart of flame. Then gas descended to form the thin breezes and stretched out the atmosphere in the middle throughout the void. The third element laid out the waters and the floating waves and poured forth the sea that it might come to be level over the whole stretch of the ocean and the fluid might exhale and emit a thin vapour and feed the air deriving its constituents from it and the winds just beneath the stars might nurture their fire. Lastly the earth settled down with the weight of its dense sphere and sludge mingled with scattered sand came together, while the light water little by little rose to the top. The more the liquid separated into pure water, the more the filtration of the waters formed dry land and the flowing Ocean made its bed in the hollow valleys, mountains emerged from the waters and a circle of the lands rose through the waves, bounded on every side by the vast Ocean. The world

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stays stable for this reason - all the sky is equidistant from it and by falling away from it in every direction prevents what is the middle and the bottom of everything from falling. [Particles 170 come to rest because of blows drawn together and by their running together are prevented from travelling any further] .

Unless the earth were suspended with balanced weight, the stars would not travel under the earth while Phoebus was travelling to the west and Phoebus would never come back to the east, nor would the moon direct her sunken courses through the void or Lucifer, who formerly gave light as Hesperos, when she had traversed the heavens, shine in the early morning hours. But, as things are now, since the earth is not cast down into the bottom-most depths of the universe, but is suspended in the middle, 175 every region may be traversed, where the day sky descends, goes under the earth and rises again. For I cannot believe that the rising of the stars as they come up is due to chance, nor that the sky is reborn so often and the sun is born anew and dies every day, while the appearance of the constellations is the same 185 throughout the ages, the same sun travels from the same part of the heavens, the moon changes through so many phases and lunations and nature keeps the paths which she made herself, not erring as if she were a novice and day is carried round with his eternal 190 light, showing the same times now to this region of the world, now to that, and an east that, as men travel to the east, is ever beyond them or a west ever beyond them as they travel to the west

and the sky is as everlasting as the sun.

The fact that the earth hangs in space should be a matter of no surprise to you. The celestial sphere itself hangs suspended and rests its feet on no base. This is manifest from its very motion and course as it revolves, since Phoebus travels suspended in the air, turning his swift chariot hither and thither and keeping the same places for turning in the sky and the moon and the planets travel swiftly through the void. The earth also hangs, in imitation of the condition of the heavens. The world therefore has as its lot a recess in the middle of the atmosphere, removed an equal distance from the outermost sphere in every direction; it does not extend in sweeping plains but is compacted into a sphere which has the same curvature in all directions in any place. This is the appearance of the natural world. The revolution of the spherical heavens make the heavenly bodies spherical in shape. We see that the sun is a sphere and so is the moon, who seeks light for her swelling body, because she does not receive the rays of the sun directly on every part of her global surface. This shape is eternal and most like that of the gods, for it has neither a beginning nor an end anywhere in itself, but has the same even appearance throughout its surface and is equal in all of itself. The earth is formed in this way, taking its shape from that of the heavens,<sup>(1)</sup> and though at the bottom of everything, holds a position in the middle of everything.

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(1) 214 Reading manet...figurat (so Housman in his editio minor).

In his editio maior he reads manens...refugit.

For this reason we do not see all the constellations  
 from all lands. You will not find Canopos gleaming anywhere 215  
 until you come in your travels through the sea to the shore of  
 Rhodes. But men for whom the fires of Canopos travel to the  
 zenith look in vain for the Great Bear, because they live in the  
 tracts forming the earth's flanks, and by its swelling in the  
 middle the earth checks and takes away their view of the heavens. 220  
 The earth calls you, Delia, as a witness to its sphericity. For  
 when you are eclipsed by night and immersed in black shadows,  
 you do not disturb all men at once by the feebleness of your  
 appearance,<sup>(1)</sup> but the races of the east first look in vain for  
 your light,<sup>(2)</sup> then those regions men till that are under the  
 sky in the middle; finally you are revolved to the peoples of the 225  
 west by the motion of your darkened chariot and the bronze is last  
 struck by the peoples on the edge of the world. But if the earth  
 were flat, when once risen, you would be eclipsed at the same time  
 for all and be mourned by the whole world at the same time. But  
 since the world is fashioned as a smooth round sphere, Delia 230  
 appears now to these people, now to those, at the same time ris-  
 ing for some, setting for others, because she is carried round in  
 the circle of the earth's rotundity and is travelling upwards and

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(1) 223 Reading languens. Housman reads gentes.

(2) 224 Reading gentes. Housman reads terrae.

downwards at the same time, successfully completing one course, leaving the other. [ from which the round shape of the earth can be seen ] . 235

Around the earth live various races of men and beasts and the birds of the air. One part of it which they inhabit rises to the Bears, another is in the southern regions and lies beneath our feet, but seems to itself to be above us, because the ground conceals its long downward slope and the surface of the earth has the same curvature in all directions. When the sun, setting for us, is rising upon and looking at this part, there the rising day rouses sleeping cities and with its light brings back to men on earth the need to start their work at the appointed time. But we are in night and place our limbs in sleep. The sea with its waves divides and unites both worlds. 240 245

This ordered whole, constructed out of the immense universe and consisting of the parts of nature put together in different forms, air, fire, earth and spreading sea, is ruled by a divine spirit. God breathes together with them as he moves, guides them with his silent intelligence and imposes mutual concord upon all his parts, so that each gives or receives powers from another and the whole stays related throughout its various shapes. 250

Now I will relate methodically the fires of the constellations gleaming everywhere. All of these you may distinguish 255

in the serene heavens. Firstly I will sing of the constellations which are in the middle and gird the heavens in an oblique file, carrying one after another through the seasons the sun and the other celestial bodies which struggle in the opposite direction to the sky. [From the planets every deduction concerning fate is made].

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Let the sign which first occupied the zenith, the citadel of heaven, be the first to be described. The Ram, leading the signs and gleaming with his golden fleece, looks back in astonishment at the Bull, rising with his hind quarters uppermost, who with his head and brow downcast summons the Twins, whom the Crab follows, the Lion following him, the Maiden the Lion. Then the Balance, when it has made the length of day equal to that of night, draws after it the Scorpion, a gleaming sign. A being part horse aims with drawn bow a swift arrow at the Scorpion's tail and is on the point of shooting. Then comes Capricorn, bent from his sign being crowded into a small space. After him comes Aquarius, who pours from his upturned pitcher streams of water which the Fishes eagerly come up to drink, as they are accustomed to do. They come at the end of the series and adjoin the Ram.

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Now, where the sky rises towards the gleaming Bears, which look down from the top of the heavens upon all the signs and do not set, but placed on the one summit, change their configurations to another and turn the heavens and the stars around

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them, an insubstantial axis is extended through the cold air and 280  
 controls the world balanced on opposite pivots. On these pivots  
 positioned in the middle revolves the starry sphere, in a circular  
 course in the ether, while the axis remains immobile, stationary,  
 extending to the two Bears through the void and the orb of the  
 earth itself. It is not composed of a solid hard substance or 285  
 corporeal, nor is it heavy, though it bears the weight of the  
 ether on high, but since all the air always travels around in a  
 circle and all rolls around the whole globe to that point from  
 which it began, what is in the middle, about which everything is  
 moved, so tenuous that it cannot be turned around on itself, 290  
 rotated or turned in a circle, men have called the axis, because  
 it has no movement itself, but sees everything in motion about it.

The top of it is held by the constellations very well  
 known to wretched sailors, which lead them in their greed through  
 the boundless sea. Helice, the greater, revolves in a greater 295  
 circle (seven stars, vying with each other in brilliance, mark  
 her). With her as guide, Greeks ships spread their sails in  
 their voyages on the waves. Cynosura is short and turns in a  
 confined circle. She is lesser than the other in brightness as  
 much as in the diameter of her orbit, but is superior to the 300  
 larger in the judgement of the Tyrians. For the Phoenicians she  
 is the surer guide as they seek on the sea the mainland which is  
 out of view. The Bears do not face the same direction; the nose  
 of each is turned towards the other's tail and they follow each  
 other. Coiled between them and embracing both, dividing and 305

girding them with his fiery stars so that they never come together or depart from their fixed positions, lies the Snake.

Between him and the circle in the middle, where the seven planets travel through the six signs in the opposite direction to them, there rise constellations which are made of 310 diverse elements; on one side they are near ice and snow, on the other flames. Because the air is not homogeneous, it moderates them by its conflict and they make the world beneath them crop bearing for mortals. Nearest to the chill Bears and the frozen 315 north comes a kneeling shape, who alone knows why he was placed in the heavens. At his back shines the Guardian of the Bears or the Herdsman, < the name men generally give as his true name, since like one threatening > he drives a pair of oxen yoked in the usual manner. He hurries along with Arcturus clasped to the middle of his breast. On the other side of him travels the Garland, with its bright orb, glittering with different lights; for the other 320 stars of the circle are outshone by one star, which is the largest and, gleaming in the mid front position, makes its gleaming lights clearer than theirs with its burning fires. The Garland gleams as a monument of the deserted Cretan girl. Among the constellations the Lyre too is conspicuous, with its horns twisted 325 in opposite directions in the sky. With it Orpheus formerly enchanted everything he touched with his music, making a path through the shades themselves and overcoming the laws of the underworld with his tune. For this the Lyre has received the

honour of a place in the sky and powers like those which caused  
 its stellification. Then it drew woodlands and rocks after it, 330  
 now it draws stars and sweeps around the immense sphere of the  
 revolving heavens. He who is called the Serpent Bearer divides  
 the serpent who girds him with the huge coils of his twisted  
 body in an effort to loosen the knots formed by the serpent's  
 arching coils. The Serpent, however, looks back, turning his  
 supple neck and returns, causing the man's hands to slip through 335  
 his relaxed coils. There will ever be war,<sup>(1)</sup> for they fight  
 with equal strength. Next to his is the abode of the Swan, whom  
 Juppiter himself placed in the sky, as a reward for his beauty,  
 by which he gained possession of his admirer, when, though a god,  
 he descended changed into a snow white swan and in feathered form  
 copulated with the unsuspecting Leda. Now too his wings are out- 340  
 stretched, as he flies among the stars. There follow gleaming  
 stars, which imitate the form of a flying arrow. After them the  
 bird of great Juppiter is carried into heaven's heights as if  
 carrying in his flight the thunderbolts he was accustomed to  
 carry. He is worthy of Juppiter and the sky, which he equips  
 with sacred weapons. At that time too the Dolphin, glory of the 345  
 Ocean and of the heavens and sacred to both, rises from the sea  
 to the stars. The Horse strives to catch him with his swift  
 course and strains after him. His breast is bright from its 350  
 gleaming star. He ends in Andromeda [whom Perseus snatches up

(1) 336 Reading semper erit (so Housman in his editio minor)

In his editio maior he reads semper iter.

with his arms and allies to himself. ] There follows a constellation called Deltoton from its similarity with the shape of the letter Delta. It has two equal sides, separated by an unequal side<sup>(1)</sup> which can be seen gleaming with three lamps. Then there follow Cepheus and Cassiepia, who was stellified because of her punishment<sup>(2)</sup>, namely the abandonment near her of Andromeda, fearing to be devoured at any moment by the vast jaws of the Sea Monster. [ She weeps over her, exposed as she is to the sea and bound to the rocks. ] But Perseus in heaven too keeps his love of old and succours her with his aid, holding up the face of the Gorgon men rightly flee, a spoil for him and a bane for those who look upon it. Then comes the Charioteer, who treads near the kneeling Bull. From his occupation he has received his name and a place in the heavens. He is followed by the Kids, who, when they appear, close the sea to sailors and by the She-Goat, well known from her nurturing of heaven's king. From her breast he ascended to great Olympus, obtaining from her animal milk the strength to wield the thunderbolt. Therefore Juppiter rightly gave her a sacred place among the eternal stars and paid her back with the gift of heaven for the gift of heaven. [ And the Pleiades and the Hyades, each part of the wild Bull, climb into the north. These are the northern signs ] .

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- (1) Reading diuisis (so Housman in his editio minor). In his editio maior he reads innisum.
- (2) Reading per poenas stellata suas. Housman reads in poenas signata suas.

Observe now the constellations which rise beneath the course of the sun - both those that glide above the lands of the torrid zone and the lights that turn between the sign of cold Capricorn and the sky supported by the lower pole. Between them lies the other part of the earth, inaccessible to us, unknown races of men and kingdoms that have not yet been crossed. They derive a common light from the one sun, but, with sky reversed, they look upon shadows falling the opposite way, signs setting on the left and rising on the right. Their sky is no smaller, nor is its light less nor are the stars that rise into its vault fewer. In other matters they are not inferior; they are outstripped by one star - Augustus, whose coming like a star has blessed our hemisphere. [ Caesar, now on earth, afterwards in heaven the greatest guide. ] You can see Orion near the Twins. He stretches his arms out over a large space in the heavens and rises to the stars of the sky with a pace as extended. A star marks each of his gleaming shoulders and his hanging sword is formed by three stars in an oblique line. But the head of Orion is immersed in high Olympus and is marked by three stars, its features being withdrawn from sight. [ Not because men claim that these stars are not as bright, but because they claim they are further away. ] The constellations travel through the whole sky with him as leader. The Dog eagerly follows, running swiftly. No constellation comes to the earth with greater violence than his, no one leaves it more oppressively. At one time he rises, bristling with cold, at another leaves the gleaming world empty for the sun.

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In this way he brings both heat and cold to the world and gives  
 contrary effects. Those who, placed on the lofty peak of Mount  
 Taurus, observe him when he first returns to rise, tell how the  
 crops will turn out, what the weather will be like, how healthy  
 the year will be and how concordant. He causes war, restores  
 peace and in his different returns affects and directs the world  
 according to the clarity of his countenance when he saw it first.  
 Clear evidence that he can do so is provided by the colour and  
 scintillation of the fire sparkling in his mouth. It is almost  
 as bright as the sun, but as it clings to the sphere of the  
 stars far away, it hurls as a weapon but cold light from its dark  
 face. It outstrips all the other stars in its brilliance, for  
 there is no brighter star which is dipped in the Ocean and comes  
 from the waves to revisit the heavens. Then come Procyon, the  
 Hare, and then the well known Argo, taken into the sky from the  
 sea, because it was the first to travel on it. It holds the sky  
 it has won by its many previous<sup>(1)</sup> dangers, made a god by saving  
 gods. Next to it shines the Snake, who by the disposition of his  
 flames forms the semblance of a scaly back; then the bird sacred  
 to Phoebus shines and with him the Mixing Bowl, welcome to  
 Bacchus and the Centaur with his twofold form, part man, joined at  
 the breast to a horse's body. Then comes the sacred precinct of  
 the sky where the Altar shines victorious - for the vows have been

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(1) 414 Reading ante. Housman reads acta.

paid which were made when Earth in her fury bore huge giants to  
 attack heaven. Then even the gods desired powerful gods, Juppiter  
 himself felt the need of Juppiter<sup>(1)</sup>, fearing he could not do what  
 he could do. For he saw the earth so rise that he believed all 425  
 nature was being overturned; he saw mountains heaped upon high  
 mountains and stars fleeing hills now near them and bearing armed  
 offspring born from the bursting of their mother's womb, creatures  
 with discordant features and mingled bodies. Juppiter had not had 430  
 any experience of an enemy coming against him and so did not know  
 whether there were any powers greater than his own. Afterwards  
 Juppiter set up the stars of the Altar, which still shines in  
 glory. Near it the Sea Monster rolls his scaly body, rising in  
 twisted coils and sets up high waves with his belly, [ He snaps 435  
 like one about to seize his prey at any moment ] just as he did  
 when, coming to destroy Cepheus' exposed daughter, with the waves  
 he created, he drove the sea beyond its proper shores. Then the  
 Southern Fish, so named from the South Wind, rises from the  
 direction of the South Wind. Joined to it are streams that twist  
 their way through huge coils of stars. Aquarius joins his waters 440  
 to the source of one, < the other river flows from the outstretched  
 foot of Orion. > (2) They come together in the middle and mingle  
 their stars.

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(1) 423 Reading eguit Ioue (so Housman in his editio minor)

In his editio maior he reads dubitauit.

(2) Reading after line 441 the supplementary line alter ab  
exserto pede profluit Orionis. Housman reads the supplementary  
 line alterius magno fons exit ab Orione after line 440.

Between the path of the sun and the hidden bears who  
 turn the axis grating from the weight of the sky, and in a  
 foreign orb, the sky is embroidered with these constellations. 445  
 Those furthest away, which ever revolve at the bottom of the sky  
 and give permanent support to the gleaming sacred regions of the  
 sky, are never brought into view by the revolution of the pivot  
 of the sky, but they have the same appearance as the stars in the 450  
 upper hemisphere and similar star figures. We believe from analogy  
 that here too are Bears which face away from each other and are  
 separated and held together in the middle by the one Snake, be-  
 cause our mind imagines that this hemisphere which turns stars  
 which in their courses escape our view, is supported by similar  
 signs, just as it is supported by a similar pole. 455

These signs then, extending through the whole vault of  
 the heavens, occupy their positions in various regions of the  
 great ether. Do not expect the form of the constellations to be  
 similar to that of beings with bodies, with all their parts gleam-  
 ing with an equal brightness, and no part completely absent or 460  
 even partly defective through lack of light. The universe could  
 not endure the great conflagration that would ensue if the con-  
 stellations blazed with every part full of light. By reducing  
 the number of stars, nature has spared herself a load to which  
 she would succumb. She is content merely to outline<sup>(1)</sup> the  
 forms of the constellations and indicate them by means of certain 465

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(1) 464 Reading describere. Housman reads disiungere

definite stars. Lines, along which star is joined to star<sup>(1)</sup>, mark their shapes; the middle parts of those lines are inferred to be there from the extremes and the middle<sup>(2)</sup> of the signs from the outsides. It is enough if they do not all hide themselves. It is especially when the moon is full and in the middle of her period that the bright stars stand out distinctly in the sky; the common run of stars is hidden; all except those worthy of a name flee. You may then see these stars gleaming by themselves in the empty heavens. They do not escape notice because of the number of stars visible, nor are they mingled with faint stars as they travel. 470

To make it easier for you to know the gleaming constellations, you should observe that they do not set or rise again in different places but each rises in a definite place on its own particular day of the year and each keeps a regular place of rising and setting. Nor is anything more wonderful in such a large mass as the order and the way in which each obeys definite laws. Never does their great number prove harmful; not one strays out of its path anywhere, travelling in too large or too small an orbit or proceeding out of turn. What else is so confused in appearance, but so certain in its periodicity? 480

No reason seems to me more cogent in demonstrating that the celestial sphere is turned by a divine power and is itself God, and did not form under the direction of chance, as the 485

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(1) 467 Reading coniungit. Housman reads respondent.

(2) 467 Reading intima. Housman reads ultima.

man who first suggested that the walls of the universe are constructed out of very small particles and declared that it returned to them, and that from them comes the sea, the earth, the stars of the sky and the ether that constructs worlds within its unmeasured boundaries and causes others to break up and that everything returns to its first beginnings and changes the shape of things, wished men to believe. Who could believe that such an immense work could have arisen without a divine intelligence or that the universe was created as the result of a chance agglomeration of tiny particles? If chance had given it to us, chance would rule it. But why do we see constellations rising at regular intervals and travelling in courses that are as it were established beforehand by some command and none hastening ahead and none being left behind? Why do the same constellations always adorn the summer nights and the same the winter nights and why does each day give a definite appearance to the heavens and leave a definite appearance? Even when the peoples of Greece overturned the towers of Ilium, the Great Bear and Orion were travelling face to face, the one content to move in her circle at the pole, the other to strive to meet her, rising up opposite her as she turns from the opposite side of the pole and ever to travel around the whole sky. Men then were already able to tell the time of night, shrouded in darkness, by the constellations and the sky had already been marked out into periods of time. How many kingdoms have been overturned since the destruction of Troy! How often has fortune

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through the revolution of her wheel bestowed slavery or empire 510  
 and then turned back to vary things! To what great power has she  
 rekindled the ashes of Troy, unmindful of the past! Already  
 Greece has been overwhelmed by the fate that befel Asia. It would  
 be too wearisome to enumerate all the ages and relate how often  
 the fiery sun has returned and travelled over the heavens in its  
 revolutions. By a law of mortality all created things change;  
 the earth does not recognize itself, stripped by the passage of 515  
 years: different peoples inhabit it through the ages. But the  
 sky remains undamaged and keeps all of its own; long ages do not  
 increase its size<sup>(1)</sup>, old age diminish it, motion warp it in any  
 least part or its revolutions weary it. It will ever be the same 520  
 because it has ever been the same. Our fathers have not seen it  
 any different, nor shall our grandsons. It is God, who does not  
 change throughout all his existence. That the sun never goes  
 sideways off its course towards the Bears, changes its course, 525  
 travels backwards to the east nor shows the dawn rising from  
 Unaccustomed lands, that the moon never departs from her regular  
 cycle of lunations, but always waxes and wanes in the same cycle,  
 that the pendent signs of the zodiac never fall from heaven to  
 earth, but each has been allotted the same time for its revolu- 530  
 tions, all this is not the work of chance but an arrangement  
 imposed by a great power.

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(1) 519 Reading quem. Housman reads this in his editio minor.

In his editio maior he reads quae.

These signs then weave the fabric of the heavens with their equal arcs, their fires forming the ceiling of heaven and patterning it with various shapes. There is nothing higher than these; they are the summit of the heavens. The abode of nature which belongs to all is held contained within these bounds and 535 embraces the sea and the spreading earth. The courses of them all are concordant as they set at the place where the sky sinks to rest and come to the place where it rises after its revolution<sup>(1)</sup>. There are other heavenly bodies, which fight with the sky, travelling in an opposite direction, ones which travel unsupported be- 805 tween heaven and earth - Saturn, Juppiter, Mars and the sun. Beneath these Mercury travels, between Venus and the moon.

Our science, which no barriers, immense masses or hidden recesses resist, teaches how much space the heavens hold in their hollow vault, in other words, within what bounds the twelve signs 540 are carried. Everything yields to it; the very heavens are penetrable. For the heavens extend twice as far as the signs are distant from the lands and the sea. From whatever point a sphere 545 is cut through the middle, the diametre thus formed is a third of the circumference - or rather, a third of a little less than the total length of the circumference. The top of the celestial sphere is therefore four signs from the bottom, since that is a third of the twelve signs. Now, since the earth is suspended in the middle of the void, it is two signs from the top and the bottom. 550

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(1) After 538 I read lines 805 - 8, with Housman, editio minor.

Whatever distance you can see from here on earth, as far as your eyes can travel through the void and where they refuse to go, should be reckoned as the equivalent of two signs. Six arcs of equivalent length form the circle through which the twelve signs proceed, occupying equal portions of the heaven. Do not wonder then that there are random offspring from the same signs and that the fate which is bestowed by each sign produces offspring of very varied kinds, when each sign occupies so much space and the six signs which rise during the time of daylight < and likewise the six that rise by night > (1) take so long about it. 555

It remains for me to try and tell you of the boundaries of the ether and the circles which accompany the heavens in a fixed sequence, those along which the fiery ranks of the constellations direct their courses.. [A circle holds up at the north the gleaming Bear] and is six full degrees from the pole of the heavens (2). A second circle runs near the extremities of the Crab. When he has reached it, Phoebus causes the length of daylight to attain its maximum extent and carries his light slowly through long arcs. From being in the middle of the regions the sun heats, this circle takes the name of summer circle, deriving its title from the name of this season of heat; blazing with heat, it marks the turning point of the sun's course and the outermost limit of his path. It is five full degrees distant from the 567 570

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(1) Reading a supplementary line nec spatium noctis liquentia plura profundum after 560, with Housman, editio minor.

(2) I accept 567 as genuine, with Housman, editio minor.

arctic circle. The third, placed in the middle of the sky, girds 575  
 the whole of heaven with its huge coil, seeing a pole on both  
 sides. There with his light Phoebus makes day and night equal,  
 travels through the mixed seasons - spring and autumn, and divides  
 the sky in the middle into equal portions. The thread of the  
 equatorial circle is distant four parts from the point of the 580  
 summer solstice. The next line beyond this, called the winter  
 circle, marks the outermost stopping place of the fleeing sun,  
 when it gives us grudgingly its gift of obliquely falling rays 585  
 and makes its swiftest journey, while for those territories over  
 which it rests the time of daylight is long and day scarcely  
 passes away, but extends through the gleaming heat of the summer  
 day. This circle lies four parts removed from the equator. One  
 of the circles remains, that nearest the pole at the other end of 590  
 the sky. It grazes the Southern Bears, keeping them besieged  
 within its boundaries. It too is five parts from the winter  
 circle and is as near to the pole opposite our pole as the circle  
 at the top of the sky is to our pole. [In this way you will find  
 that a pole is two parts from the other and that Olympus is sur- 595  
 rounded by two segments and the time is marked by five lines.]  
 These circles travel in the same direction as the sky, have the  
 same rotation and curvature and rise and set in the one latitude,  
 since they are bent in the direction in which the whole sky  
 revolves and cause their lines to accompany the course of high 600  
 heaven, keeping always the same distance from each other in the

positions allotted and the places given to each.

There are two circles connecting one pole with the other and opposite each other. They cut each other and all the circles previously mentioned and come together at the twin pivots of the sky. They cross the sky transversely and travel straight to the poles. They measure off the seasons of the year and divide the sky into four lots of signs, each lot consisting of an equal number of months. One colure runs down from the heights of Olympus, cuts the serpent's tail into two and divides the Bears which are never dipped in the ocean from each other and cuts in two the crossbeam of the Claws, travelling on the circle in the middle of the sky. [A circle goes through the sky which is born at the upper pole, seeking the Guardian of the Bears through the Serpent's back; it touches Erigone, cutting off the top of the Claws and is six full parts from the pole of the sky] and cutting the end of the Water Snake and the middle of the Centaur, under his shoulders<sup>(1)</sup>, meets at the south pole the opposite circle; it then comes back up to the sky and marks the scaly body of the Sea Monster, the territory of the Wool Bearer and the bright Triangle, the lower part of Andromeda's robes, her mother's feet and makes for the north pole again and reaches the point where it began its journey. The other circle bisects this circle at the north pole, passes through the forefeet and neck of the Bear, whose seven stars are the first to come forth when the sun has

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(1) 612 Reading armis. Housman reads astris.

departed and provide light for the black night. It then divides  
 the Crab from the Twins and grazes the Dog with his burning mouth  
 and the rudder of the ship which overcame the sea. From these it  
 passes the hidden pole at right angles to the constellations of 625  
 the abovementioned circle and after its intersection with that  
 circle it turns back to touch you, Capricorn and, passing from  
 your stars, marks the Eagle. It runs through the downturned Lyre  
 and the coils of the Snake, passing by the stars in the hind feet  
 of Cynosura and cuts her tail at an angle near the pole. Then it  
 meets up with itself again, mindful of its place of departure. 630

The seasons have fixed these in their eternal abode,  
 with unchanging paths through the constellations and an ever-  
 lasting position, but have made another two changeable in position.  
 For one rises from Helice, cuts through the middle of the heavens  
 and divides the sky in two, holds the sixth hour balanced, behold- 635  
 ing east and west at equal distances. It changes its position  
 amid the constellations. Whether a man travels east or west, he  
 has described above him a circle directly overhead, which cuts  
 through the middle of heaven and divides the roof of the sky. 640  
 With his place on the earth he changes the sky above him and the  
 time of day, since there is a different meridian for different  
 places. The hour travels through the sky and when Phoebus rises  
 from the crests of the waves it is the sixth hour for those above  
 whom his golden orb then lies. On the other hand it is the sixth 645  
 hour for the men to the west when he disappears into the shades.

of night. We reckon these two sixth hours as our first and our last, when we feel the cold light from the sun's distant fire.

If you wish to discover the path of the other circle, let your eyes and gaze travel free roaming over the heavens. The lowest point of the sky and the end of the earth, where the universe comes together with itself with no distinction between its parts and gives the gleaming stars to the Ocean or receives them back, bounds the sky at right angles with a narrow line. This line too extends through the whole sky, at one time approaching the tract in the middle, the warm belt of the universe, at another the seven stars and the stars which do not move. Wherever your wandering footsteps lead you, travelling now to these, now to those parts of the earth, the circle will ever be different and will change with the lands you visit. For since it displays one part of the heavens and leaves the other behind, it will always hide a half of it and make the other half visible in its place, marking it with a changing border, its line moving with the line of sight. [ This will be terrestrial, because its orbit embraces the earth and the circle girds the world with its level boundary and taking its title from the word for boundary, it is called the horizon. ]

Consider as well as these, zones lying at an angle to them and travelling in an opposite direction to each other. One

contains the gleaming signs around which Phoebus directs his chariot, wandering Delia following him in her chariot, as also the five planets, which strive against the sky moving in an opposite direction and practise various choral movements in accordance with the law of nature. The Crab occupies a position at the top, Capricorn a position at the bottom; it twice receives the circle which makes the time of light equal to that of the shadows and cuts the line of this circle at the signs of the Wool Bearer and Balance. In this way the ecliptic meets three circles at an angle and because its path is at an angle to them, it conceals the fact that it is travelling in a straight line. It does not escape the line of sight and is not visible merely to the mind, as the aforementioned are, but its immense circle gleams like a huge belt made of stars and makes the sky there conspicuous with its broad embossed band<sup>(1)</sup>. [ The band is three hundred and sixty degrees long and twelve degrees broad. It contains the planets gliding in their different courses.]

The other circle is placed at an angle to it. It approaches the Bears, then swings back at a short distance from the arctic circle, passes through the stars of upturned Cassiepia, then, descending at an angle it touches the Swan, cutting the summer circle and the Eagle lying on his back, the circle which makes the times of day and night equal and the part of the circle

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(1) 680 Reading lato caelamine (so Housman editio minor) In his editio maior he reads caelato culmine.

which bears the horses of the sun between the tail of the burning 690  
 Scorpion and the arrow at the extreme left of the Archer. It then  
 twists its coils through the legs and feet of the other Centaur  
 and begins again to ascend the sky, dividing the Argives' ship  
 through the top of its stern, then the middle one of the universe's  
 circles and the lowest part of the Twins. It comes up towards the 695  
 Charioteer and approaching Cassiepia, from whom it set out and  
 passing above Perseus, it concludes in Cassiepia the circular  
 course it began from her. It cuts the three circles in the middle  
 and that bearing the signs on either side and is cut as many times 700  
 itself. There is no need to look for it; of its own accord it  
 falls upon the eyes, of itself it tells where it is and compels  
 one to note it. For it shines in the azure sky like a gleaming  
 white path, seeming about to roll back the sky and bring on the  
 day suddenly and is like a passage dividing verdant fields, one 705  
 which wheels renew and reform with their incessant passage. [It  
 is a level way between the areas which it divides.] As the sea  
 grows white from the furrow formed by the keel and just as with  
 foaming waters the waves accept this path which a rotating whirl- 710  
 pool moves down from a seething mass of water, so does this  
 brilliant white path gleam in the black heavens, cleaving the  
 azure sky with an immense light. As Iris stretches her bow into  
 a circle through the clouds, so does this path lie above us,  
 marking the summit of the heavens in gleaming whiteness and caus-  
 ing men to gaze with heads tilted back, while they look in wonder

upon this unaccustomed light in the dark night and seek with their 715  
human intelligence the sacred causes. Perhaps, they think, the  
mass of the celestial sphere is trying to shake itself loose and  
draw apart its hemispheres and hence cracks are developing, the  
joins being few and far between, and admitting an unaccustomed 720  
light because of the loosening of the cover. (What is it that  
men would not fear would happen to themselves if they saw the  
wounds of the great heavens and the injury done to the universe  
struck their eyes?) Perhaps, on the other hand, the sky<sup>(1)</sup> is  
coming together and the ends of two hollow segments are joining,  
causing the starry edges of the sky to come together, and through 725  
this joining a livid scar is created which is soldering the edges  
together. Or perhaps the star studded sky is turning the founda-  
tions of high heaven into an ethereal cloud with a dense struc-  
ture<sup>(2)</sup> and wedging them together. Or is this story more prob-  
able, that in former times the horses of the sun travelled there,  
their course being different from their present one, and wore 730  
away another route? The burning of the area through a long  
period of time and the scorching of the stars by its flames  
changed the azure colour and the resultant piling up of ash  
buried the sky. Furthermore a story has come down to us from 735

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(1) 723 Reading mundus (so Housman in his editio minor). In his  
editio maior he reads nondum.

(2) 726-7 Reading stellatus an orbis/aeriam in nebulam densa  
compagine uersa. Housman reads stipatus et orbis/aeriam  
in nebulam clara compagine uersus.

years gone by that Phaeton<sup>h</sup> flew through the signs in his father's chariot. While he was marvelling at the unaccustomed light of the sky from nearby, and, only a boy, played in the heavens, revelling vaingloriously in the gleaming chariot and desiring to perform actions greater than his father's, he turned his four horse team away from the usual course, left the way he had been shown and made a fresh circle in the heavens. The constellations, however, being unaccustomed to them, did not endure the flames of the chariot as it swung right away from its turning place. Why then do we complain that flames raged throughout the world and funeral pyres burned throughout every city of the earth? When the fragments of the shattered chariot flew in all directions the sky too was burned up. The heavens atoned for the conflagration themselves and stars unaccustomed to the proximity of fire blazed. Even now these stars bear the appearance of the disaster which befel them in the past.

As well as this, I must tell you of the old story, milder than the usual one, the story that milk flowed from the snow white breast of the queen of the gods and dyed the heavens with its colour; for this reason it is called the Milky Way, its name coming from its cause. Perhaps a rather large crowd of stars in a dense circle, weave together their flames and shine with light packed thickly together, and the circle gleams the more brightly from their combined radiance. Perhaps the Milky Way consists of brave souls, men deemed worthy of heaven, who, freed from their bodies and released from the earth, have migrated here

and dwelling in the heavens that are their due, live through the 760  
 years in the ether and enjoy the bounty of the universe. Here  
 we reverence the sons of Aeacus and of Atreus, Tydeus' wild son,  
 the Ithacan, victor over nature from his triumphs over land and  
 sea, the Pylian, distinguished by this threefold old age, the 765  
 kings of the Greeks at the towers of Ilium [the camps of the  
 leaders and of the sky and Troy conquered just after Hector's  
 death] <and Hector, bulwark and glory of the Ilian race,> the  
 black offspring of the Dawn, the son of the thunderer and ruler  
 of Lycia; nor should I omit to mention you, warlike maid, nor  
 the other kings whom Thrace dispatched, the races of Asia and  
 Pella, which owed its pre-eminence to its pre-eminent king,  
 Alexander. I will mention also men who were wise, had force of 770  
 intellect and grave, disciplined characters, men whose whole  
 wealth lay in themselves, namely just Solon and stern Lycurgus,  
 divine Plato and he who made him what he was, the man who<sup>se</sup> con- 775  
 demnation rather condemned his own Athens; the conqueror of  
 Persia, which strewed the sea with ships; the great men of Rome,  
 of whom there are now so many - the kings except for Tarquin, the  
 offspring of the Horatii, who formed on their own a battle line,  
 Scaeuola, who achieved greater fame because of the loss of his 780  
 hand, the maiden Cloelia, who proved even greater than men,  
 Cocles, who carried engraved on his shield the walls of Rome which  
 he protected, Coruinus, who, because the bird which bears within  
 it Apollo in winged form was his fellow soldier, won his spoils  
 and the name Coruinus, Camillus, who earned a place in the

heavens by saving Juppiter and by saving Rome established it firm- 785  
 ly, Brutus, who gave its constitution to the city he had saved  
 from a king, Papirius, Fabricius and Curius, equals of each other,  
 Marcellus, who was the third to win the spolia opima, Cossus, who  
 won it before him by killing a king, the Decii, vying with each  
 other in their vows and like each other in their triumphs, Fabius,  
 invincible because of his delaying tactics, Liuius, conqueror and 790  
 slayer of Hasdrubal, with Nero his ally in the war, the Scipionic  
 leaders, alone the destroyers of Carthage, Pompey, the conqueror  
 of the world and through his three triumphs emperor before the  
 time was right, Tullius, who won a place in the heavens because of  
 the riches of his tongue, the great offspring of the Claudii, the 795  
 chiefs of the Emilian house, the noble Metelli, Cato, conqueror  
 of fortune and Agrippa, a soldier in his mother's army and the  
 Julian family, who have sprung from Venus. Augustus descended  
 from the heavens and will duly fill it and rule it in its course  
 through the signs, with the thunderer as his helper. He will be- 800  
 hold in the company of the gods great Quirinus <and the new god  
 whom he himself in his filial devotion added to the gods> (1)

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(1) Reading Quirinum in 801 and after 801 the supplementary line  
quemque nouum superis numen pius addidit ipse (so Housman  
 in his editio minor). In his editio maior he reads Quirini  
 and the supplementary line numen et illius, quem diuis  
addidit ipse.

higher than the shining circle of the etherial world. This is the abode of the gods, the other the abode of those who, like the gods in their valour, reach heights next to theirs<sup>(1)</sup>.

Now before I begin to expound the influence exercised by the planets and sing in my poem of the powers of the constellations in regard to fate, I must tell of the whole appearance of the heavens and note, considering all the universe, whatever gleams<sup>(2)</sup> and blazes up in any place at any time. There are moreover, fires that are born but seldom and then straightway extinguished. Few ages, only those of great turbulence, have seen comets suddenly flash in the liquid air and perish when lengthened. Perhaps they do this because the moister atmosphere is overcome by this dry exhalation as the earth breathes forth the vapour born within it. When clouds retire, driven from the expanse of clear sky and the atmosphere becomes parched and seared by the rays of the sun, the fire travels downwards and seizes on tinder suited to it, the flame catches material that can contain it, and because the elements of vapour do not form a solid body, but wander in a loose, rarefied state, very like drifting smoke, their combination exists but a short time and the conflagration ends as soon as it has begun and comets fall at the same time as

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(1) Reading lines 805-8 after 538 (so Housman in his editio minor)

In his editio maior he reads them after 812.

(2) 812 Reading nitens (so Housman in his editio minor). In his editio maior he reads nitet.

they show their light. If their rising were not so near their setting and if their flames blazed for more than such a short period, there would be another day by night and when the sun returned it would catch the world sunk in sleep. Since it is not in the one form that all the drier vapour of the earth is dispersed and caught by fire, there are also found lights which suddenly appear, shattering the darkness<sup>(1)</sup> and travel their fiery way in different forms. Sometimes the flame in its flight imitates hair, as if long tresses were flowing from the crown of a head, that is, the tenuous fire with its burning rays puts out strands of hair in all directions. Sometimes this first shape with its scattered hair changes and there follows a mass in the shape of a blazing beard. Sometimes it forms a rectangular figure, or the shape of a square cut beam or a smooth round column. Sometimes indeed the fire with its swelling flame even resembles vats distended in the shape of a womb, or when rolled into compact balls it resembles a small she-goat with hairy chin because of the flickering light and scatters lantern shaped lights with branched fires in different directions. Falling stars hurl a thin fire with long tresses and appear to fly in all directions when their wandering lights scintillate in the gleaming heavens and leap over vast distances, imitating swift arrows and their high paths are marked with thin threads. Fire is, as a matter of fact, mingled in every part. It dwells in heavy clouds forging thunderbolts

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(1) 834 Reading ruptis. Housman reads subitis.

and penetrates the earth, threatens to turn Olympus into Etna and 855  
make the water hot in cold springs and find a living place in hard  
flint and in green bark, when the trees of a wood rub together and  
catch fire: so abounding in fire is the whole of nature. Do not  
wonder that torches burst forth suddenly from heaven and the air  
is fired and lit up with shimmering flames when it has embraced the 860  
dry seeds of the breathing earth which the swift fire feeds upon,  
pursues and flees, when you see the lightning flashing with a  
flickering light from the middle of a rain shower and the sky  
split by a lightning bolt. Perhaps these sudden flames arise 865  
because the earth, providing seeds for swift fires, can generate  
comets, or nature gives birth to these torches as obscure stars,  
shining with feeble flames in the heavens, but Titanus with his  
devouring heat draws them to himself and envelops the flaming 870  
comets with his fire and then lets them go, just as Mercury and  
Venus, when she leads on the night, having lit the lamp of even-  
ing, shining late, vanish from sight and come back again. Perhaps  
God, taking pity on the world, sends signs of the fate about to 875  
befall it by lighting fires in the heavens. Whatever the cause,  
it is not with meaningless fires that the ether glows. Farmers,  
disappointed, bewail their fields, overgrown with weeds and the  
weary ploughman forces his mourning oxen to bear the yoke for a  
futile task among his sterile furrows. Or else a death dealing 880  
fever seizes bodies with the slow corruption of serious disease  
and eats out their marrows, snatching away failing peoples and  
throughout all the cities mass burials are made and funeral pyres

are lit in common. A plague of this kind ravaged Erechtheus' people and caused a funeral for the entire city of ancient Athens 885 in time of peace. Then one man fell and collapsed upon the corpse of another. There was no place for medical skill, nor were religious vows of avail. Attention ceased to be given to the sick nor were the dead buried or wept for. The weary fire failed and bodies burned with their parts heaped one on top of the other and 890 a people once so great were blessed with scarcely an heir. Such things do gleaming comets often portend. Funerals come with torches in heaven and they threaten the earth with endlessly burning pyres, in as much as the heavens and nature herself are sick 895 and fear men will be buried<sup>(1)</sup>. Moreover fiery comets also prophecy sudden wars and disturbances and revolutions involving clandestine fraud, sometimes among foreign races. For example, when Germany broke the treaty, snatched away our leader Varus and dyed the plains with blood from three legions, everywhere threat- 900 ening lights blazed in the sky and nature herself waged war through fire, opposed her own strength and threatened her own ruin. Do not wonder at the grievous disaster that befell men and nature. The fault is often ours. We do not realize that we 905 should trust the heavens. Comets even portend civil tumult and war between blood brothers. Nor at any time did the heavens endure more conflagrations than when troops which had sworn an oath

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(1) 895 Reading hominum (so Housman editio minor). In his editio maior he reads nouum.

to blood stained leaders filled the fields of Philippi in martial  
array and Roman soldiers stood on sands not yet dry and above the 910  
bones and limbs of men mangled in the earlier battle and fought  
for empire against their own strength. Augustus conquered, father  
following the footsteps of father. Things were not finished even  
then. There remained the battle of Actium, begun by an army  
received as a marriage gift and dice were again cast to see who  
would rule the world and a ruler for Olympus was sought at sea. 915  
Rome's fate hung in the balance: she feared the yoke of a  
woman and the very thunderbolts of Juppiter strove against the  
rattle of Isis. There remained the war against a soldiery of  
runaway slaves, when Pompey's son, imitating his father's  
enemies, seized the sea that had been defended by his father. 920  
But this should be enough for fate. May war now be silent and  
discord bound in adamantine chains, and, with its bonds eternal  
may it ever remain imprisoned. May the head of state remain un-  
conquered father of his native city. May Rome remain under him, 925  
and, although she has given a god to the sky, feel no lack of a  
god on earth.

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BOOK 2

The greatest of poets sang in inspired utterance of the battles of the Trojans, of a king and father of fifty kings, of Achilles' defeat of Hector<sup>(1)</sup> and of Troy in the person of Hector; the wanderings of the leader who, for as many years as he had taken to conquer Troy  $\left\langle \text{laboured under the hatred of Neptune,} \right\rangle$ <sup>(2)</sup> afflicting him with a renewal of war<sup>(3)</sup>, a repetition at sea of that before the towers of Ilium. He sang further of Ulysses' 5  
last battle, in his homeland and captured house. So many are the cities that claim him as theirs that their efforts only succeed in making his real birthplace unknown. All succeeding poets have drawn into their poems a stream of speech flowing abundantly from his lips and have presumed to channel it into thin rivulets. 10  
They are productive through the genius of one man.

Next to him comes Hesiod, who sings of the gods and the parents of the gods, of chaos giving birth to the earth and of the infant sky under her power; of the stars, travelling uncertainly

(1) 3. Reading Hectoraque Aeacidæ (so Housman in his editio minor).

In his editio maior he reads pectoraque Aeacii.

(2) After 4 I read Housman's supplementary line infestum experti dominum maris atque renato.

(3) Reading instantem bello (so Housman, editio minor). In his editio maior he reads luctati remo.

when they first began their courses, the old Titans, the cradle  
 of great Juppiter, husband though a brother, and father of one 15  
 without a mother, of Bacchus' second birth - from his father's  
 body, and of the gods of the woodlands and the deities associated  
 with them, namely the Nymphs<sup>(1)</sup>. Moreover he also told of the  
 laws of tilling the countryside, the fight to make the soil pro-  
 ductive, how the vine loves the hills, the prolific corn the plains 20  
 and olive trees both, of trees adulterated with the fruit of any  
 old tree, and he listed in order all the luminous bodies travell-  
 ing through the boundless sky, a work of peace time, to be of use  
 in the great works of nature. Some have told of the various con- 25  
 figurations of the stars and have assigned to each of the con-  
 stellations gliding everywhere throughout the spreading heavens  
 its proper class and have told why it was placed there: Perseus,  
 who is in the act of freeing from their punishment Andromeda, her  
 mother and her father, both grieving over her, the daughter of  
 Lycaon, who was raped by Boreas and Cynosura, placed among the  
 stars for her services to Juppiter, the She Goat on account of her 30  
 suckling him, the Swan for the deceit he allowed him to practise;  
 Erigone because of her devotion to her father, the Scorpion  
 because of his sting, the Lion because of his skin, taken as  
 spoils, the Crab because of his bite, the Fishes on account of  
 Venus' transformation into a fish, the Wool Bearer, leading the  
 signs, on account of his victory over the sea and claim that all 35

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(1) 23 Reading sociataque numina Nymphas. Housman reads  
sacrataque numina Nymphis.

the rest of the constellations travel in their fixed positions in the ether at the top of the heavens for various other reasons. In their poems the sky has no more independent reality than a stage play and the earth has determined the composition of the sky, whereas in reality it is dependent on it. He who was born in the land of Sicily tells of the life of shepherds and of Pan blowing on his pipes. It is not a crudely woodland song he sings in the woods, but throughout the unkempt countryside he inspires men with sweet feelings and brings his Muse into it<sup>(1)</sup>. Another poet tells of painted birds or the war between savage animals. That same famous poet tells of poisonous snakes, aconite and herbs which bear in their roots life or death. Some even summon Tartarus, shrouded in darkness, from black night to the light of day and unravel the secrets of the world, turning it inside out and breaking the laws of nature. The skilful sisters have sung of every subject; all the paths approaching Helicon are worn bare; already the streams flow sullied from their sources, nor can they provide draughts for the crowds thronging after what is well known. Let it be ours to seek dew clad grass in untouched fields, water in hidden caves mentally practising murmuring, water which birds have not touched with their hard beaks or Phoebus sipped with his etherial fire. Mine are the words I will speak. I will owe their beginnings to no other poet; it will be no stolen work but my own. Alone I am speeding into the heavens in my chariot; from my own

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(1) 42 Reading illa. Housman reads aulas.

boat I am striking the water. For I will sing of God, having  
power over nature with his unspeaking intellect, pervading the  
sky, the earth and the sea, governing this mighty mass according 60  
to a just arrangement: how the whole universe lives with harmony  
between its parts and is directed by the movement of an intelli-  
gence, since one breath dwells through all its parts, refreshing  
it and speeding through everything, giving the whole its life and 65  
form. Unless this mechanism stayed bound together with all its  
parts harmonious and obeyed in its entirety the master set over it  
and unless wisdom ruled the great riches of the universe, the  
earth would cease to stand still, the stars to go round it, the  
heavens would wander aimlessly or grow immobile through lack of 70  
movement, nor would the constellations keep to the various courses  
allotted to each, nor would night flee day or day night in turn.  
Showers would not nourish the earth nor winds the ether, the sea  
the heavy clouds, rivers the sea nor the sea their sources, nor 75  
would the sun remain ever the same in all its parts, as it has  
been arranged by an impartial father, established so that the  
waters do not fail, the circle of the lands does not sink beneath  
them and the heavenly sphere revolves with neither more nor less  
than its proper volume. Movement nurtures, it does not change  
this structure. In this way all remain in the places allotted to 80  
each in the whole universe and obey their master. God then, of  
whom I speak, the divine reason, who governs everything, guides  
the living things of the earth by means of the constellations,  
whose influence, although they are far away, he yet makes felt,

with the result that they decide the life and fate of the races 85  
of men and give each man his own character. There is no need to  
look hard for proof of this: the sky influences the soil in like  
manner, making different crops grow or die: it moves the sea and  
makes it flow onto or ebb away from the land. This disturbance  
which holds the sea in its power is sometimes caused by the moon's 90  
phases, sometimes by its motion towards or away from the equator  
and sometimes accompanies Phoebus' swift yearly journey. Creatures  
submerged in the sea, closed in their prisons of shell, change  
their size in accordance with the phases of the moon, imitating  
your waning and your waxing, Delia. In like manner you return the 95  
light of your face to your brother's chariot and receive it again  
from the same source; you reflect all he has given you or merely  
what he has left you. You owe your existence as a star to his.  
Lastly, in the same way, beasts and dumb animals, although they  
remain ignorant of themselves and of natural law throughout their 100  
life, nevertheless, when nature reminds them of the sky, their  
father, feel their spirits rise and watch the heavens and the  
stars; they purify themselves when the horns of the waxing moon  
appear, they foresee storms to come and that calm weather will 105  
return. Who would hesitate after this to connect man with the  
heavens? ... outstanding. Nature has given the gift of speech,  
a mind capable of thought, a swift intelligence and into him  
alone has God descended and dwelling in him seeks himself. I  
pass over other skills whose exercise we have been granted, one

almost too great; indeed they are gifts not befitting our status. 110

[I pass over the fact that nothing is given subject to an equal law, whence it is evident that this totality of things belongs to a creator, not mere matter: I pass over the fact that fate is certain and inevitable and that it is given to matter to be constrained but to the universe to constrain.] Who could know the heavens except by the gift of the heavens or find God unless he 115 himself shared in the divine nature? Who could behold or encompass within the narrow limits of his mind this mass of the vaulted heavens stretching on without boundaries, the dancing constellations and the fiery roof of the universe, the everlasting war of the planets against the constellations [the earth and the sea under the sky and the things under both of them] unless nature had 120 given to his mind eyes to discern heavenly things, directed to herself a mind related to her own and told him of such a great science and unless that science comes from heaven, as it does, seeing that it calls a man heavenward to the sacred fellowship of everything that is? Who would deny it is wrong to try and gain a 125 knowledge of the heavens when the heavens are unwilling and, as it were, seize them where they stand and bring them down to the earth? However, I will not try to prove what is self evident by a long circuitous discussion. The reliability of predictions will give both weight and credibility to this science, for it is 130 never deceived or deceiving. This way, since it is for due and sufficient reasons that we believe in it, must be followed. Then

things turn out just as they were predicted. Who would say that what Fortune ratifies is false and go against the vote of one so mighty?

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In wishing, inspired by the breath of God, to make this theme famous, I will write my poem neither as one of the crowd nor for the crowd, but alone, as if I were freely driving a chariot around an empty course, with no one coming in the opposite direction, or going the same way as myself. I will write to inform the heavens and the stars will wonder and the universe rejoice at the song of her poet. I will also write for those to whom the stars do not begrudge a knowledge of their sacred paths and themselves. In all the world such people are very few. Swiftly does the crowd pass away who love riches, gold, power, the rods of office, soft ease and luxury, the crowd who are ready to turn their ears to soothing sounds and sweet harmony stealing through the ears, because these are matters involving little effort compared with that required to acquire a knowledge of fate. This too is a gift of fate, to master the laws of fate.

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Firstly in my poem I must mark the difference between the signs in the matter of sex. Six are male; there are as many of the other sex, their leader being the Bull - you see how on his return he rises with his hindquarters uppermost. The sexes alternate, each occurring in turn in the zodiacal circle. Some, moreover, you will observe, have human shapes, with characters to match: others the characters of domestic animals or wild

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beasts. Certain ones are single signs and must be marked with care. They have no partners. Now turn your attention to those of twofold nature: their influence will be affected by their partner. A companion adds or takes away much. Those signs which have one are either beneficial or harmful in their influence. Consider the twin Fishes among the signs and the two Twins with their bare bodies. The Twins' arms are joined together and they are clasping one another, but the Fishes are turned away from each other and swimming in opposite directions. There are as many of each, you may observe, but their nature is different. These double signs, because they have partners, travel rejoicing in the completeness of their being. They are not bewildered by anything strange in themselves, nor do they grieve at the lack of anything, as some do, since part of themselves is missing and they consist of parts of alien bodies joined together; these other signs are Capricorn and the being who is joined to a horse and aims his taut bow. Part of the latter is human, but none of the former is. [This distinction too must be observed in our lofty science, for it makes a difference whether twofold signs are twins or have a twofold nature.] Erigone too is numbered among the twofold signs. The reason does not lie in her twofold shape - it is because on the one side of the Maiden summer ends, on the other side autumn begins. The signs that precede all the tropical signs, namely the Wool Bearer, the Claws, the Crab and Capricorn, are double, because they have twofold powers due to their joining

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the seasons. Hence of the twin brothers the Crab follows among the signs, one gives the blossom bearing season of spring, the other carries forward thirsty summer, but both are naked, for both feel the heat, one the heat of the dying spring, the other that of the summer just born: the last part of the Twins is like the first. The Archer who brings forth Capricorn behind him also has a twofold shape in his travels: mild Autumn lays claim to his gentle part, the substance of a man: the animal part receives on its back stiff Winter and changes the nature of the constellation to be in accordance with the season. The two Fishes whom the Ram sends before him also mark two seasons; one ends winter, the other begins spring. When the sun in his course is travelling through this aquatic sign, winter rains and vernal showers meet and mingle: both sorts of moisture hold the sign that swims.

Three consecutive signs are joined in opposition to the other nine and a kind of civil strife holds heaven in its power. See how the Bull rises with his buttocks foremost, the Twins with their feet, the Crab with his shell, while the others rise with their bodies upright. Stop wondering at the sun's slowness as he journeys through the signs which rise with their hindquarters foremost and, moving slowly through its months, causes the season of summer to come to a more elevated position in the zodiac.

Do not forget to observe what are the diurnal and what the nocturnal signs and find them out by the correct law. They are not the signs which travel in darkness or in the light

(because in that case all the signs would have the same name without any distinction, since they shine in their turn throughout the year and the diurnal signs sometimes come after the day, the nocturnal signs sometimes come after the night), but those to whom nature, father of the universe, has given portions of time consecrated to them to be theirs for ever. For example, the Archer and the roaring Lion and he who gazes upon his back with the golden fleece upon it, the Fishes, Crab and Scorpion with his sharp sting are either next to each other or divided from each other by the same number of signs. They are all equally numbered under the diurnal signs. The rest, the same as the diurnal in their number and arrangement and the same intervals from one another as the diurnal, are called nocturnal signs. Some have said that the six consecutive signs starting from the leader, the Wool Bearer, are diurnal, the six beginning with the Balance nocturnal, others that the diurnal signs are the masculine, while the feminine rejoice in the security of the darkness.

Some signs make it plain themselves, with no need of anyone to explain, that they owe their nature to Neptune - the Crab who dwells among the waves on the rocks and the Fishes, rejoicing in the open sea. The signs considered to be of terrestrial nature are the Bull, the leader of the herd, the Ram, proud from his rule over the Wool bearing flock, the Lion who feeds on both and the Scorpion, a danger to both in fields overgrown with scrub. There are as well signs of a middle class, having the

characteristics of both classes, Capricorn, belonging to both because of his lower parts, Aquarius, because of the water he pours forth [and the gleaming marine part of Aquarius ever pouring water.] In these marine and terrestrial are mixed in equal proportions.

You must not turn your attention away from even the smallest concerns, for nothing is without purpose or made for nothing. The Crab, the Scorpion with his sharp sting and the Fishes, who fill the sea with their offspring, are distinguished from the others by their fertility. But the Maiden is sterile. She is neighbour to the Lion, who is of like condition. Either Aquarius does not conceive or if he does he aborts. Capricorn, with his mixed body, and the Centaur, who gleams with Cretan bow, are between two classes. The Ram too is common to both and he makes the Balance, which makes the length of day equal to that of night, the Twins and the Bull, sharers in the same lot.

Do not imagine that nature has not deliberately chosen that some signs should be runners, the Lion, the Bow Bearer and the Ram with his curved horns, or that others should balance standing upright on their legs - the Maiden, the Twins and Aquarius who pours forth a stream of water, others in their weariness sit, showing that they have sluggish minds - the Bull, who rests after the plough has been taken from his shoulders, the Balance, in a state of collapse after performing its cycle of labours, and Capricorn, huddled up among the stars because of the

frost he brings, or others, lying down - the Crab, lying on his spreading belly, the Scorpion, lying on the ground under his smooth abdomen and the Fishes, always lying down and with their sides at an angle to each other. 255

If you observe all the signs with care and attention, you will find that some are maimed, having been deprived of some of their parts. The Scorpion has lost his claws in the Balance, the Bull has fallen on his knee, with one foot doubled up; the Crab has no eyes, the Centaur has one left but lacks the other. In this way the universe gives us consolation for our misfortunes 260 in the stars and from their example teaches us to bear loss patiently, seeing that the whole law of fate is dependent on the sky and the signs themselves are formed with parts of themselves maimed.

Signs also have their own seasons in which they are 265 powerful. Summer begins in the Twins, autumn in the Maiden, winter in the Archer, spring in the Fishes. Three signs each are allotted to the four seasons: the signs of winter fight with those of summer, those of spring with those of the autumn. It is not enough to learn the characteristic form of each sign and the par- 270 ticular lot each gives to those born under it - the signs also influence fate by their interaction and take delight in combinations and are connected to others in various intervals and configurations. In the zodiac, which revolves to the right and forms a complete circle, a line proceeds in different directions, forming three equal lengths, joined to each other at the extrem- 275 ities. Whatever signs it touches are called triangular, seeing

that its triangular shape touches three signs, separated and divided from each other by three signs. The Wool Bearer looks at two signs, the Lion and the Archer, both an equal distance from him, but rising at different times. The Maiden and the Bull are in harmony with Capricorn. The other triangular signs - those I have not mentioned - are ordered in the sky in the same way, in the same number of configurations as I have already mentioned. [But there is a difference between right and left signs. Left are those which come after, right those which go before. Capricorn is a right sign to the Bull, the Maiden a left.] These are enough for an example. The signs which are divided from each other by four signs and are so placed that they have between them signs of equal length, whose positions are marked by a set square, men call quadrangular signs. Capricorn looks at the Balance in front of him, the Ram looks at Capricorn in front of him, the Crab at the Ram, an equal distance in front of him and the Balance looks at the Crab from the left and behind. Signs that precede are always classified among the right ones. In this way you may divide the whole zodiac of signs into four parts and make three quarters from the twelve signs. I will tell you the efficacy of these squares in due course.

Anyone who thinks it all right to calculate the squares on the supposition that the zodiacal circle is inscribed with lines each five signs long and who hopes in this way to discover the effects of signs upon each other and the friendships between

men born under different signs and their alliances through signs 300  
 related to each other in the heavens, will be deceived. For,  
 although there are five signs on each side, all the same, those  
 who have been born under one or other of the three signs which  
 are situated in every fifth place<sup>(1)</sup>, cannot feel the effects of  
 a triangle and although these signs are said to form a triangle, 305  
 because of their position they do not feel the influence of one  
 and do not have lines of the correct length to form one. For  
 since the zodiacal circle consists of three hundred and three  
 score sections through which fiery Phoebus travels, a third of  
 this number makes one side of an equilateral triangle bent around  
 in the zodiacal circle in three parts. But a line does not give 310  
 this total if you count by whole signs and not by degrees, be-  
 cause although there are two signs, with three signs between them,  
 on each side, if you count up the number of degrees between the  
 end of a sign on the left and the beginning of the one before it, 315  
 you will find that, coming one after the other, they total thrice  
 fifty. The number will be too great to form a side of an in-  
 scribed triangle and will encroach upon the territory of the  
 following side. So that even though these signs be called tri-  
 angular, they do not preserve the form of an actual triangle.  
 The same false appearance will deceive you in the quadrangular 320

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(1) 303 Reading sexto. Housman reads quinto.

signs too. Of the total number of degrees which comprises a circle, each sign contributes thirty to make up a square inscribed in the zodiacal circle. Hence, if a line is drawn from the first part of a preceding sign to the last part of a following sign, it will cut off an arc of one hundred and twenty degrees, but if the last part of a preceding sign is joined to the first part of a following and you measure and calculate the number of degrees the two signs in the middle contain, you will find it is only sixty, too few by a third and, although you are calculating the distance of a sign to another three signs away, the number of degrees in one sign will be missing from the required number<sup>(1)</sup>. Thus it is not satisfactory to calculate the length of sides of triangles by signs or to seek the true length of a side of a square by counting the four signs which form it. If you want to construct a square, or are forming the sides of an equilateral triangle, add a fifth part to a hundred degrees to form a side of the triangle, take away a tenth part for the side of a square. In that way the number will add up correctly. Nature has given to those places forever joined in a fourfold series and blessed by an angle touching each and to those places which a line marks with its three sides when it leaves the longer curved circumference in a straight path, dealings with each other under a common law, making them well disposed to one another, enjoying the rights of mutual friendship. Hence not everyone born under one sign is of one mind with others born under the signs of the same triangle<sup>(2)</sup>, nor do

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(1) Omitting 684-6, placed here by Housman

(2) Omitting 343-4, repetitions of 318-9

men remain ever friendly to those whose signs are of the same 345  
square. It makes a difference whether the perimetre of a three  
sided or four sided figure contains the correct number of degrees  
for a circle or too many; for in some instances calculation shows  
that these sides comprise more signs than have been counted within 350  
the circle of the zodiac.

The influence of signs of a triangle is much greater  
than that of the quadrangular signs - signs so named from their  
being in every fourth place. The perimetre of a square is higher  
in the sky and the segments formed by it far removed from the  
earth. The perimetre of a triangle travels nearer the earth and 355  
further from the heavens. The lines by which its signs gaze upon  
each other are nearer to the earth and send to our atmosphere  
tainted air.

The influence of alternate signs upon each other is  
weak, nor do they keep their alliances with much harmony, because  
the perimetre bends but grudgingly and forms only small segments. 360  
For when the perimetre is formed, travelling past each sign in  
its journey, a vertex is entertained at each alternate sign and  
the perimetre is bent around in the zodiacal circle through six  
angles. It comes from the Bull to the Crab, then, touching the  
Maiden, it enters the Scorpion, then frozen Capricorn and after it 365  
the twin Fishes and, touching the Bull who rises with his hind  
quarters uppermost, it completes its course where it began. The  
path of the other hexagon travels to the signs the former passed  
over: in other words, if you omit one by one the signs I have

already mentioned, a cyclic figure is formed with the same number 370  
of vertices as the former. Alternate signs lie hidden from each  
other in a hollow recess - accordingly they tend to avoid each  
other, being observed by each other only by an indirect line of  
sight, because they lie at too steep an angle from each other and  
are only seen from the corner of the eye and hence lie concealed  
from their neighbour. There is a clearer line of vision from  
straight ahead. Because the path, which only just avoids touch-  
ing every sign in its journey round the zodiacal circle, passes 375  
very close to the concave heaven, its force is far from us and  
wanders about in high Olympus, sending but feeble influences from  
far off to the earth. All the same they are allied by sex - for  
the sex of the signs so joined is the same - and masculine are con- 380  
cordant with masculine - the others, of feminine sex, are also  
joined in alliance in the heavens with each other. So, although  
the signs are alternate, their nature is the same, and they are  
related according to the law of sex.

There is no concord between adjoining signs; agreement 385  
is destroyed because they have no line of sight to each other.  
They fix their affections on signs removed from themselves, signs  
which they can see. Moreover, these adjoining signs in the zod-  
iac are of different sex, masculine being next to feminine and  
always beset from both sides. [ There is no concord between signs 390  
of different sex.]

Signs four signs distant from each other are also

reckoned as of no value to each other in any of their powers, because no equilateral figure can be inscribed in the circle with them as vertices, for while its path forms vertices at two signs with four signs between them, the third side is not long enough, too much of the zodiac having been used up.

Now those constellations which shine from opposite sides 395 of the zodiac, suspended, with countenances directly facing each other across the centre and which are opposite each other and divided by the whole diametre of the zodiacal circle, six signs removed from each other, although they travel far away from one another, yet show forth their power and affect each other from afar, being either well or ill disposed to each other according 400 to circumstances - as the planets make them either harmonious or discordant.

If you want to discover the names and positions of the signs directly opposite each other, reckon the summer solstice as opposite the winter, the Crab as opposite Capricorn, the Wool Bearer as opposite the Balance (day and night are equal when the sun is in either), the Maiden as opposite the Fishes, the Lion opposite the young man with the pitcher. When the Scorpion glistens at the top of the zodiac, the Bull is at the bottom; the Archer sets as the Twins rise over the earth. [ Signs opposite each other keep courses among themselves. ] Now, although these 410 signs shine thus opposed to each other, nature sometimes makes them allied. Since their sex is the same, mutual concord arises, masculine being concordant with those of the same sex even in

these conditions, those of the other sex with their own sex. The Fishes and the Maiden move opposite each other, but they cherish a common bond, their nature overcoming their position. But nature is overcome by position in the case of the Crab and Capricorn, where female is opposed to female, because summer disagrees with winter. From one comes numbness and ice and a countryside white with snow, from the other thirst and sweat and a world with bare hills; the cold night of winter is as long as the day of summer. In this way nature makes war; such is the discord within the year. Do no wonder then that the signs in these positions fight each other. The Wool Bearer and the Balance, however, are not entirely unharmonious, because, although spring and autumn are different in season (one fills the earth with ripe crops, the other with flowers in bloom) they behave in the same way; during both day is equal to night; they produce weather of similar character and hence are harmonious. Their days are of mixed condition - half way between summer and winter. Because they contain the equinoxes, they both have the same mildness and hence do not fight each other in fierce war<sup>(1)</sup>.

When this has been discovered, what is our next concern? To find out the guardian deities of each sign and determine what signs nature allotted to each of them when she gave divine titles to the great moral virtues and allotted various

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(1) 430. Reading articulis uno seruantia utrimque tenore (so Housman in his editio minor). In his editio maior he reads articulis unum seruantia utrumque teporem.

powers to particular divine beings, so that personality might add  
 dignity to inanimate things. Pallas protects the Wool Bearer,  
 Cytherean Venus the Bull, Pheobus the comely Twins; the god of 440  
 Mount Cyllenius rules the Crab; Juppiter rules over the Lion, as  
 the mother of the gods also does. The Maiden, who carries the  
 ear of wheat, belongs to Vulcan. The martial Scorpion cleaves to  
 Mars, Diana cares for the Huntsman, who is part horse and Vesta  
 warms Capricorn, huddled up from the cold. Opposite Jove's sign 445  
 is Aquarius who belongs to Juno. Neptune acknowledges as his own  
 the Fishes of the sky. From these facts will come things of  
 great importance to you in predicting the future, when you make  
 your calculations by means of all the stars and planets and look 450  
 for material and ways of procedure for your science from every-  
 where, so that the divine power may arise in your mind and men  
 may prove to be authorities as reliable as the heavens themselves.

Now learn how the parts of the human body are divided  
 among the signs and how each part of the body obeys its own proper  
 sign: learn the parts of the whole body each sign specially in- 455  
 fluences. The Ram, the leader who goes before all, has the head  
 as his sphere of influence; the Bull, the neck, the fairest of  
 his possessions. The arms, joined to the shoulders, are enrolled  
 under the Twins, one to each twin; the breast is placed under  
 the Crab; rule over the flanks and small of the back is given to 460  
 the Lion and the groin to the Maiden as their proper parts. The  
 Balance rules over the buttocks, the Scorpion has his glory in the

sexual organs, the thighs are subject to the Centaur, Capricorn rules over both the knees, Aquarius the water pourer has dominion over the legs; the Fishes claim the feet as their possession. 465

Now, the signs also associate with each other according to their own laws, so that their dealings proceed in regular ways; they look at or hear each other, love or hate each other, while some are turned towards themselves and make their way full of self love. Hence sometimes there is mutual regard between signs 470 directly opposed to each other, while associated signs make war upon each other and those which have no common tie by position make men born under them fast friends all their life. Sometimes those born under the signs of the same triangle fight and flee each other in turn. The reason for this is that God, when he made the whole sky subject to his laws, also gave different 475 friendships to men according to the signs they were born under. He joined the eyes of some signs, the ears of others, uniting these in the bonds of an abiding association, so that some might hear or see each other, some love or try to harm or fight each 480 other, some even direct their love to themselves, loving and being pleasing to themselves always. In the same way we see that there are several types of men, each deriving his character from the sign he was born under.

The Ram is his own counsellor, as befits a leader; he 485 hears himself and sees the Balance. He loves the Bull, but his love is not returned. The Bull plays the coquette with the Wool Bearer and among the stars hears the twin Fishes, gleaming

beyond the Ram. He is captivated by the sight of the Maiden. It  
was for this reason that in times of old he carried on his back 490  
Europa, holding onto his horn with her left hand. His form was a  
disguise for Juppiter. The Twins direct their ears to the Young  
Man pouring forth ever running streams of water for the Fishes,  
their heart to the same Fishes, their eyes to the Lion. The Crab  
and Capricorn directly opposite him turn their eyes upon them- 495  
selves, they hear each other and Aquarius is deceived by the  
coquetry of the Crab. The untamed Lion directs his gaze upon the  
Twins, listens to the Centaur and loves Capricorn. Erigone looks  
upon the Bull, listens to the Scorpion and strives to weave a web 500  
of deceit for the Arrow Bearer. The Balance follows its own  
desires, seeing only the Wool Bearer and cherishing in its heart  
only the Scorpion beneath it. The Scorpion sees the Fishes and  
hears the sign next to the Balance. The Bow Bearer is accustomed  
to hearken to the mighty Lion and to observe with his eyes the  
breast of Aquarius the water pourer and of all the signs he loves 505  
only Erigone. On the other hand Capricorn turns his gaze upon  
himself (and what better thing will he have to gaze on in wonder,  
seeing that he shone upon and blessed the birth of Augustus?)  
With his ears he hearkens to the Crab, placed at the summit of 510  
the zodiac. But naked Aquarius listens to the Twins, loves the  
Crab placed on high and looks at the drawn bow of the Archer.  
The Fishes direct their gaze upon the fierce Scorpion and desire  
to listen to the Bull. These are the mutual relationships nature

gave when she put the signs in their places. Men born under them 515  
 act towards each other as their signs do. They desire to hear some,  
 see others. [ The same signs are now lead to hate some, love  
 others. ] They strive to entice some and are themselves enticed by  
 others.

Alternate triangles move in opposition to each other 520  
 and alternate<sup>(1)</sup> perimetres, since their paths move in opposite  
 directions, cause their signs to war on each other. So universal  
 and self consistent is the true order of things. For example the  
 Ram, the Lion and the Bow Bearer, signs allied in one triangle,  
 refuse their friendship to the Claws and to the whole triangle  
 which the Twins and Aquarius who pours forth streams of water com- 525  
 plete. One must confess this is true for two reasons: because  
 each of the three signs in one triangle shines opposite a sign in  
 the other triangle and because the war between men and beasts is  
 eternal. [ The appearance of the Balance is human, that of the  
 Lion is different. ] The beasts yield for this reason - intell-  
 igence is mightier than great strength. The Lion shines among 530  
 the stars because he was conquered; his golden fleece allowed  
 the Wool Bearer a place among them; the Archer because of his  
 lower parts yields to a part of himself, so inferior is his lower  
 half. No wonder then that those born under these signs can be  
 conquered by the Balance's triangle. 535

This is not the only cause which assigns enmities to 570  
 men at their births, making them hate each other and wage war.

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(1) 521. Reading tertia. Housman reads altera.

Alternate signs are generally hostile to each other. This is  
 because they look askance at each other with malign countenance  
 and because the signs one sign away from signs which are opposite  
 each other in position, five signs removed from each other and 575  
 glare at each other from directly opposite, belong to the triangle  
 of one or other of these signs. So it is no wonder that those  
 signs which belong to triangles which have signs opposite each 578  
 other are not joined in friendship. There is also a shorter cause 536  
 that may be followed through the signs. Whatever signs shine  
 with human form remain hostile to the animal signs they have con-  
 quered. Nevertheless, each sign has its own free will and fights  
 its own private wars with its own private enemies. Those born  
 under the Wool Bearer war with those born under the Maiden, the 540  
 Balance, the Twins and those whom Aquarius' water washes. Those  
 born under the Crab proceed against the offspring of the Bull,  
 the Claws and those whom the fierce Scorpion and the Fishes bring  
 forth. Those whom the Twins shape fight with the Wool Bearer and 545  
 his triangle. The seed of Capricorn, the offspring of the Balance  
 and those whom the Maiden brings forth and those who are numbered  
 under the Bull, who rises with his hind quarters foremost, harm  
 those born under the Crab. The Wool Bearer and the raging Lion 550  
 have the same foes and war is undertaken against them by the same  
 number of signs. Erigone fears the Scorpion who is subject to the  
 bow of the two natured Centaur, the Crab, the Fishes and chill  
 Capricorn. A large crowd attack the Balance - Capricorn and the

Crab opposite him, the signs belonging to the square of the Young Man and on either side of him and the signs which are ranked to form the Wool Bearer's triangle. The Scorpion is held to be prolific of as many enemies. He flees the Young Man who handles water, the Twins, the Bull, the Lion, Erigone and the Balance, being feared by the last two in turn and he flees the offspring of the sign of the Archer, whom those born under the Twins, the Balance, the Maiden and the Pitcher wish to crush. In accordance with the law of nature, the same are the enemies of those born under Capricorn. The Nemean Lion and all his triangle goad into battle those whom Aquarius pours forth in his stream of ever flowing water. They are but a crowd of wild beasts...by the valour of one Young Man. Neighbouring Aquarius, the Twin Brothers, those whom the Maiden brings forth and those who come from their mother's womb under the sign of the Archer, press upon those born under the Fishes.

Men opposed to each other arise under all these signs and, as I have shown, are often and in many ways born each other's enemies. Hence nature has made from herself nothing greater or rarer than friendship. There was but one Pylades, but one Orestes, who preferred that he himself should die; through all the ages but one time when anyone strove to die first, when neither would allow the other to embrace death. [ And two who could follow things scarcely harmful due to punishment and the

surety hoped that the defendant could not return and the defendant feared that the surety might allow him to go free. ] Through so many lifetimes, so many ages and years, so many wars and hardships even in time of peace, when fortune looked for loyalty among friends she scarcely found it anywhere. But how great is the weight of crime through all the ages, how great the inexcusable load of hatred in the world - fathers sold to their death, the tombs of mothers...Phoebus brought night and left the earth. What need to mention the destruction of temples and betrayal of cities, various disasters in time of peace, the mixing of poisons, treachery in the forum, slaughter at the very walls of the city and great numbers practising villainy in friendship's name? It is among the mob that crime is found and everything is filled with madness, right and wrong are confused and evil rages by means of the laws themselves; the bonds of crime are fettering punishment. The reason why peace has been taken from the earth and loyalty is rare and granted only to few, is evident - it is that men are born foes to each other under many signs. As the sky is at war with itself, so is the earth, and men are fated to be hostile to each other.

If however you wish to know as well the signs which are related to each other, join together and travel in fated friendship, join the offspring of the Wool Bearer and all his triangle. The Ram however is free from guile and treats the offspring of the Lion and those born under the Centaur better than he is treated himself. For he is by nature a gentle sign, exposed to

harm himself, but offering none in return and his heart is as soft 615  
 as his fleece. But the other signs are wild and eager for prey  
 and their greed sometimes causes them to violate pledges of loy-  
 alty in their own interest, nor is their gratitude for what is  
 done to them lasting. But when the offspring of the Wool Bearer  
{ is troubled by both and suffers from their violent attacks and  
 treachery, } he does not spare his triangle, but now and then 620  
 wages war, if the occasion demands, because the savagery of his  
 partners compels him to put out a barrage of threats. [ Neverthe-  
 less the twofold part human sign must be considered stronger than  
 you, Nemean Lion, with but one nature. ] Hence these signs have  
 propensities for both peace and contentiousness mingled in them.  
 The Bull is joined in a triangle with Capricorn, but their hearts 625  
 are not joined in friendship any more than those of the preceding  
 are. Moreover, those who are born under the Bull, desire to em-  
 brace the offspring of the Maiden, but they often quarrel. Those  
 born of the Twins, the Claws and Aquarius, have one heart and an 630  
 unbroken bond of friendship. They will have great success in  
 making many friends. The Scorpion and the Crab make those born  
 under them so close that they could be called brothers, and those  
 born under the Fishes are friendly to them. But often these 635  
 signs act in an underhand way: the Scorpion scatters the poison  
 of harm while pretending to be a friend and those who have the  
 Fishes present when they come into the light, do not always have  
 the same disposition of mind - they sometimes change it, breaking  
 off friendships or trying to renew them again and under a serene

exterior lurk hates which are not constant. This is how you must 640  
mark the hates and friendships depending on the signs.

But merely to concentrate on the signs is not enough;  
you should also consider their place in the heavens and the abode  
of the planets. Signs change their nature and a figure alters its 645  
force according to its position in the heavens. According to their  
position, their own special qualities come to squares, triangles,  
the figure whose perimetre traverses six sides and the transverse  
line which passes through the centre of the heavens. It makes 650  
a difference whether a sign is rising, setting or travelling be-  
neath the horizon. When they are in one position, the sky grants  
them their powers, when in another, it denies them. Those signs  
which take up enmity from one place, lay it down when they reach  
another. Signs opposite each other are more often hostile than  
not. Relations are most often born under signs of the same square,  
friends under signs of the same triangle. The reason is obvious.  
Nature has made every third sign throughout the zodiac of the same 655  
kind. Four signs mark off the heavens at equidistant points; at  
these God has located the turning points of the year. The Ram  
gives us spring, the Crab the time of the corn harvest, the Bal-  
ance the time of vintage, the Goat and Fish born to be cold,  
winter. Those of twofold figure are also placed in every third 660  
place. You can see the two Fishes, the twin young men, the two-  
fold form of the Maiden and the two bodies of the Centaur - even  
though they are combined into one. So too the single signs form  
one square. The Bull has no companion, nor is the terrible Lion 665

joined to any other being. The fearless Scorpion too has no partner and Aquarius is reckoned as a single sign. Thus the signs which form the angles of a square are of a similar type, either because of their shape or because they are connected with the seasons. They remain as it were related, in this kind of bond of union. Hence they indicate relations by marriage, assist close relations and protect those born with the same features. A longer line, extended to a greater length, when it has touched three signs, makes them the signs of a triangle. These lead either to friendships which follow the ties of blood or to heart to heart friendships, and as they themselves come together though sundered by a great distance, so they join us, though far apart. Men consider the figure which joins hearts better than that which sometimes breaches the ties of blood. Signs next to each other assist neighbours, alternate signs guest friends. In this way the fixed order of the signs will be preserved, however many there are which move on the hinges of the sky { as its revolution changes the effects of their proper nature. } [Although these signs form quadrangular signs of the zodiac divided into four parts, they are not reckoned under the law of squares. The effect of a number is less than that of a hinge<sup>(1)</sup>.] Consider the parts belonging to each sign and the signs proper to each part of each sign. No sign is entirely subject to itself, but

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(1) Reading 684-6 in the manuscript position. Housman transposes them to follow 331.

signs are combined; they give part of their territory to other signs and receive parts of others in their turn. I will presently 690 treat the subject methodically. It is from all these that you can discover, through our science, the method by which you may distinguish signs peaceably disposed to each other from those which are hostile.

Now examine carefully a thing which appears trivial, but is in reality of great importance, one that can only be called by a Greek name - a dodecatemory. Its meaning is evident from its name. Since each sign consists of thirty degrees, when this 695 number is divided by twelve, calculation shows that the parts so formed each consist of two and a half degrees. This is the size of a dodecatemory, and there are twelve of this size in each 700 sign. The great Architect of the universe gave them to the gleaming signs, which are as many in number, so that the signs might be allied by thus giving and receiving and the zodiac might be similar in all its parts, all the signs might influence all the 705 others, through their mixture concord might rule the whole zodiac and because of their common origin, all protect each other.

Those begotten on the earth are created under this law. Therefore, although they may be born under the same sign, they have different characters and opposite aspirations. Often the nature of one is worse than that of another and a female follows a male; a medly<sup>e</sup> 710 of offspring come to birth under the one sign, because each sign varies its offspring with its divisions, altering its proper effect with the dodecatemories.

Now I will tell what parts belong to each sign and in what order, lest you wander aimlessly through ignorance of the parts of the signs. They retain their first part for themselves, the next is given to the following sign, the other signs in order receive their parts according to their position. The last part is granted to the last in order. Thus every sign has two and a half degrees in each sign and the total is made up by thirty degrees being so filled in every sign. 715 720

There is however more than one type of dodecatemory and more than one method of finding them has been revealed. Nature has so placed the truth that it requires several methods to find it. She has made several ways and wishes us to search on all of them. The following class of divisions, which has been given the same name, has also been discovered: multiply by twelve the number of the degree the moon stands in at the time of birth, because this is the number of signs which gleam in the heights of heaven. Out of this result, remember to attribute to that sign in which the moon is shining its own number of degrees as well as the remaining number of degrees in that sign. The next sign gets thirty degrees and the following signs as many. When the number of degrees left is less than thirty, divide the remainder into groups of two and a half degrees, allotting each group to the remaining signs in order. The sign in which they are exhausted will be the one whose dodecatemory the moon is in. Afterwards she will hold the dodecatemories of the others in turn, in the order in which the signs are placed. 725 730 735

So that you will not be lead astray by the following class of divisions, I will tell you briefly from consideration of parts of a dodecatemory (the smaller division is the more important) the size of another division called a dodecatemory. It is a fifth of the size of the dodecatemory described above, for there are five bodies which are called wanderers and which shine pre-eminant in the sky. Each planet has its own half degree and its power and influence is exercised in that. You should therefore observe in what dodecatemory each planet is placed at a particular time. For the effect of a planet in any sign will be influenced by that of the dodecatemory within whose borders it stands. Material from every part of the sky must be used in establishing our science, which determines everything. I will relate this all to you later methodically. Now it is enough to teach you what you do not know by telling you its proper use, so that when you become confident in your grasp of each part, the whole will be easily perceived, and my song, after treating each part, will be able to teach the whole profitably. In teaching unlettered children to read you begin by showing them the shape of each letter and telling them its name, afterwards you teach them successively how to use it, how to form syllables by the combination of their constituents and how to make words which must be read syllable by syllable. You then teach the meaning of words and the rules of grammatical combination. Finally a poem comes into being and arises with appropriate metre. It is necessary to have already learnt the individual parts in order to con-

struct the whole. Unless each part is soundly based on its basic  
 elements, the wrong order will make the labour vain and what a  
 teacher has taught too hastily will be forgotten. So in my case 765  
 too, as I traverse the whole of the universe in my poem and sing  
 of the discovery of destiny formerly hidden in deepest darkness,  
 even setting this discovery to the measure of the Muses and as I  
 summon to my poem the power by which God rules, belief must be  
 won gradually and each part treated in its proper order, so that 770  
 when all things are certainly known, they may be put to their  
 proper use. When a city is rising on a bare mountain and its  
 founder prepares to surround the empty hills with walls and be-  
 fore any hand is put to the digging of trenches, there is a hum  
 of activity. (A forest falls, the trees of a glade which has  
 stood from time immemorial are felled and the sun and the stars, 775  
 unseen before, are visible. All the tribes of birds and beasts  
 are driven from their places; they leave their ancient dwellings  
 and the haunts they have known. Other workers dig for stone for  
 the walls and marble for the temples. Hard iron, found by the  
 well known signs<sup>(1)</sup>, is sought. From one place come men of skill, 780  
 from another men of experience. Then at last the work itself  
 arises, when everything is available. If the part which should  
 be done later were done first, the work would stop only half com-  
 pleted. So too in my case, as I prepare to perform a task as  
 great as this, evidence must be gathered, just as building mater- 785  
 ial, before deductions are drawn, so that they might not after-  
 wards prove false and the arguments as they come into being stand

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(1) 780 Reading pignora. Housman reads tempora.

bewildered before new evidence.

Come now, direct your care and attention to learning about the cardinal points, of which there are four in all, stationary and distributed at equal intervals throughout the zodiac. They receive now one of the moving signs, now another. One is at the eastern horizon, where the sky begins to rise upon the world and where it first beholds the earth from a level place; another, corresponding to it, is on the opposite shore of the ether, where the sky disappears and goes headlong into hell; a third marks the heights of high heaven; at it weary Phoebus rests with panting horses; he causes the day to drowse and holds the shadows evenly balanced at their midpoint. The fourth holds the lowest place and derives its title to fame from its forming the foundation of the zodiac; in it is the beginning of the return and the end of falling for the signs; it beholds the signs rising and falling equally. These places all make known their special powers and very important influences of fate through our science, because the whole sky depends on them as if on everlasting pegs. If they did not in turn receive the sky as it flies on in its everlasting course and bind it together at two lateral points, at the lowest and the topmost point of its area, the fabric of the sky would come adrift, dissolve and disperse.

Now each cardinal point has a different influence - these points differ according to their position and they differ in importance. First comes the one which rules from the top of

heaven and divides the sky in two with a thin line. As it is  
 exalted, Glory holds it as her lofty seat (plainly such a guardian  
 is a suitable one for the topmost point). Hence she claims for  
 herself whatever stands above the crowd and every distinction and 815  
 rules over the distribution of positions of honour. This is the  
 source of applause, eminence, all forms of popularity with the  
 crowd, the giving of judgements in the law courts, bringing the  
 world under the rule of law, joining foreign races in alliance  
 through mutual treaties and exalting the name of every man accord-  
 ing to his social station. The next in rank, though it is set in 820  
 the lowest place, supports the sky, set as it is on its everlast-  
 ing foundations. Its influence is less in appearance but greater  
 in reality. It controls the basis of property and governs wealth;  
 it examines how wishes are fulfilled in the digging for metals  
 and how much can enrich a man from hidden sources. The third 825  
 cardinal point...<sup>(1)</sup> holds up the rising heaven. From it the  
 stars begin to rise, the day returns, and marks off the time in  
 hours. For this reason it is called the horoscope among the  
 cities of Greece. It does not admit of a name from another lan- 830  
 guage for it rejoices in its own. It has the power to control  
 and regulate a man's life and character, determining the success  
 of his enterprises, the skills he acquires, what early nurture  
 and upbringing he will receive when he is born, what education he

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(1) In 826 the text is corrupt.

will get and in what social station he will be born, all this depending on how the planets co-operate and mingle their influences. The last, which hides the stars when they have journeyed through the heavens, occupies their setting point and looks down upon the sky beneath the horizon, is concerned with the conclusions of events and undertakings, with marriage, feasts, the last years of life, leisure, social intercourse among men and the worship of the gods. 835 840

You should not be content merely to note each cardinal point, you must also carefully memorize the regions between them. They cover more space than the cardinal points and produce their own particular effects. The region which curves from the eastern horizon to the zenith claims the first years of a person's life. 845 The one which curves down from the topmost point of the sky to the western horizon succeeds to the years of boyhood in its region and presides over early youth. The part which is below the western horizon and descends to the lowest point of the sky rules the time of maturity, disciplined by the ever moving cycles of years 850 and the differing tenor of existence. But where the course is completed...<sup>(1)</sup> wearily and with failing strength ascends the arc curved on its back. Finally it embraces the last years, the days of decline and palsied senility. 855

Every sign, whatever its position at the time of birth,

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(1) In 852 the text is corrupt.

is affected by these divisions of the sky. Each part rules the signs in it, giving them helpful or harmful qualities. Each sign in its revolution around this sphere receives powers and gives powers in its turn to the sky. For the nature of a part<sup>(1)</sup> prevails and administers laws within its boundaries, compelling the signs when they are passing through it to share its character and be at one time rich from various honours, at another endure the shortcomings of a sterile part. The region above that of the eastern horizon and one removed from that containing the zenith is unproductive, hostile to future undertakings and extremely fertile in disasters. It is not the only one. There is another like it, which shines opposite it and just under the western horizon  $\left\langle \text{where the danger of death is so great}^{(2)} \right\rangle$ . Both are dejected in their travels, being threatened with a fall at every moment. They are the gates of toil. From one the constellations must rise, from the other fall. The region above the western horizon and that opposite below the horoscope are no more fortunate. The former resembles a man hanging with his face to a precipice, the latter one with his back to one. The former fears

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(1) 860 Reading loci. Housman reads genus.

(2) In the second half of 868 I read qua tanta pericula mortis, a hemistich preserved in M after 902 in the form per tanta pericula mortis. Housman reads neu praestet cardine mundi.

death in the neighbouring cardinal region; the other will fall  
 if deprived of support. Rightly therefore are they regarded as  
 the dread abodes of Typho, whom cruel Earth bore, when she made 875  
 war on heaven. Her children proved as large as she was herself.  
 But they were driven back into her womb by the thunderbolt and  
 mountains fell over them and returned to the earth and Typhoeus  
 was shut up in a tomb ending his warlike life. His mother herself  
 trembles as he seethes under Mount Etna. The region which strives 880  
 to reach the summit of the shining sky next to it, so as not to  
 yield to this adjoining region - its prospects are better - rises  
 up higher, seeking the palm and victorious over the regions be-  
 low it. The goal of its endeavour is to be a companion of the  
 topmost region. After that the journey only leads to lesser  
 things and there is nothing left to wish for. Hence it is no 885  
 wonder that, being the nearest to the top and fresher than the  
 seat of Fortune there, it is dedicated to the being called Giver  
 of Blessings. By so rendering does our language approach nearest  
 to the richness of the Greek and render name for name. Juppiter  
 dwells here. Believe him who rules it when he says it should be 890  
 revered. There is a region, the mirror image of this one,  
 which has been set beneath the earth; it touches the lowest  
 point of the submerged sky and shines from directly opposite the  
 former region. Worn out by the efforts it has made, doomed to  
 more toil and on the point of submitting to the yoke of a very 895  
 powerful region, the cardinal region, it does not yet feel the

weight of the universe, as yet it but hopes for that honour. The  
 Greeks call it Daemonie; Latin lacks a suitable translation.  
 Store the place and name of the powerful god carefully in your  
 mind. They will afterwards, when recalled, prove very useful to 900  
 you. It is mostly here that factors affecting our health reside  
 and the diseases that make war upon us, fighting with weapons  
 that we cannot see. The power of chance and the god is twofold,  
 making the influence of this place now good, now bad. Phoebus  
 nurtures with his gleaming light the region following on the  
 region of midday; here the top of the sky begins to make a curved 905  
 descent from its highest point. Under his light and through his  
 power this region decides what disadvantages and what good for-  
 tune we are to have. This place is called Deus after its Greek  
 name. Shining opposite to it is the region of the sky which first  
 begins to rise from the lowest abodes and bring back Olympus. 910  
 Its light is somber and it rules over death; it recognizes Phoebe  
 as its mistress. She looks at the realm of her brother gleaming  
 from the opposite part of the sky. Her life imitates ours, in  
 that the area of her which is lighted suffers continual loss. 915  
 This region is called Dea in Latin; the Greeks give it the same  
 name in their language. In the citadel of heaven, where the top-  
 most parts of the upward curve find an end, the downward curve  
 begins and the zenith stands above and between the eastern and  
 western horizons and holds the sky equally balanced in its scale, 920  
 Cytherean Venus claims an abode among the stars and sets her

countenance, by which she rules the affairs of men, at the place  
 which is, as it were, the face of the sky. This region has its  
 own particular influence; it rules over marriage, the bridal  
 chambers and the ceremonial torches. This guardianship, control 925  
 over her own weapons, befits Venus. The region is called Fortune.  
 Remember this, so that I may shorten some sections of a long poem.  
 Where the sky with its revolving axis is at its lowest point and  
 looks upon a world whose face is turned away and where it lies 930  
 lost in midnight gloom, Saturn exercises his power. He was once  
 cast down from rule over the universe and from the throne of the  
 gods, and a father himself, he exercises divine power over the  
 fortune of fathers and that of old men. Its Greek title - 935  
 Daemonium - indicates powers appropriate to the name. Come now,  
 behold the sky rising from the first cardinal point, where the  
 rising signs begin their accustomed courses, where the green sun 940  
 swims forth from the cold waters and little by little is fired  
 with a tawny fire, essaying a steep and difficult journey where  
 the Ram leads the signs. They say this is your abode, Cyllenian  
 Mercury, son of Maia, its name being one suited to its appearance.  
 Authoritative writers themselves give you this name. This one 945  
 region watches over two things. Nature has placed in its keeping  
 all the fortune of sons and made dependent on it the vows of  
 parents. There is one region left, that at the western horizon.  
 It hastens the sky as it rushes down to the earth and causes the  
 stars to sink. It looks upon the receding sun, whereas previously

it looked upon his face. Do not be surprised then that it is called the Gate of black Dis and holds the end of life... Here even the day dies. The earth takes him away by means of its spherical surface and holds him captive in the bonds of night. This region also claims guardianship over good faith and constancy of heart. So great is the power in this abode which calls the sun to itself and hides him, receives him, brings him back and ends the day. It is according to a law of this kind that we must designate the powers of each region. All the signs pass through them in order; they receive powers from them and give their own to them; the planets pass through them in fixed order, as nature permits, giving different powers to different places, whenever they occupy one or other of these foreign kingdoms or take hospitality in one or other of these foreign encampments. I will sing of this in the part of my poem devoted to the planets. It is sufficient for the present to have indicated the parts of the sky and their names, the influences of each region in itself and the gods which preside over each. [The man who founded our science called this part octotropos. What motions the planets give when flying with diversity through this name, comes in the proper order of things.]

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BOOK 3

Lead me, O Muses, as I rise to a new theme and undertake  
 what is beyond my strength, not fearing to travel through glades  
 that are difficult of access. It is your borders I am trying to  
 extend and set rich themes, unknown before, to song. I shall not  
 sing of the beings born to make war upon and destroy the heavens, 5  
 of this offspring buried in their mother's womb by a fiery thunder-  
 bolt, of kings sworn to wage war and as Troy was approaching its  
 fall Hector for sale to be turned to ash on the funeral pyre and  
 Priam bearing his body. Nor will I sing of the Colchan woman  
 selling her father's kingdom and her mangled brother in exchange  
 for the enjoyment of an immoral passion, the crop of warriors, 10  
 the flames of fierce bulls, the watchful serpent, the years of  
 life brought back, the fire made from gold and the offspring con-  
 ceived in evil and more evilly murdered. I will not sing of the  
 long drawn out war against the Messenian aggressors, the seven  
 leaders and the walls of Thebes rescued from flames by a thunder- 15  
 bolt, the city conquered because it had conquered, of those who  
 were the brothers of their father and grandsons of their mother,  
 the meal a father made of his children, the stars turned back-  
 wards in their courses and the snatching away of the day. Nor will  
 I sing of the war declared by the Persians on the deep, the sea  
 hidden beneath a great fleet, the sea admitted into the earth, 20  
 the path made on the waves of the sea, nor the deeds of that

great king which would take longer in the telling than they took to perform. I omit the origin of the Roman race, how there were as many leaders of the city as there were wars and times of peace and how all the earth came under the sway of one people. It is 25  
easy to spread sails under a favourable wind, cultivate soil that is fertile by various arts, add lustre to gold or ivory, when the raw material itself shines. It is a common feat to write poems on fine looking themes and compose a work on a simple theme. But 30  
I must struggle with numbers, things with names new to poetry, the times, the various destinies given by the universe, its movements and its divisions, the succession of the signs and parts of what are parts themselves. How difficult a task to tell of what is too difficult to know! And to do it in appropriate poetic words! 35  
And to join these words in sure feet! Come here all you who are capable of turning your ear or eye to my attempts and listen to a true utterance. Give your attention. Do not expect sweet strains, the theme itself refuses ornament, content that it should be expounded. If any names are referred to in a foreign tongue, that 40  
will result from the theme, not the poet. It is not everything that can be translated. Some things are better referred to by their proper names.

Come now, direct your most careful attention to a very important matter, which when I have expounded it, will be of very great use and give you in this science sure ways of perceiving what is destined to happen, provided that you store it carefully 45

in a vigilant mind. Nature, the source and guardian of hidden things (when she distributed such a mass within the walls of the universe and put a ring of scattered stars around the earth, suspending it in the centre of everything, and associated different parts in a fixed order into the one body and bade air, land, fire and floating water give each other sustenance in turn so that concord might rule so many fighting elements and the universe might be bound together by their interaction), so that nothing should be exempt from the power of the whole and what is part of the universe should be ruled by the universe itself, made even the destinies and the lives of men depend on the stars, making them the controllers of every part of human activity, of the gift of life and men's reputations, and making them travel on never tiring. To these signs which are distributed along the middle of the sky, its chest as it were, and sometimes outstrip Phoebus, the moon and the planets and are sometimes outstripped themselves, nature has given rule and given each sign sacred powers as the property of that sign and ordained that the whole of human affairs should be guided by all these signs, so that deductions concerning fate should be made everywhere from their behaviour. For every class of things, all men's toil, works or skills, every event that can happen anywhere in human life, nature has divided up and distributed among areas, of which there are as many as there are signs she has placed in the zodiac. She has given each area definite functions and its own duties and placed everything pertaining to men under

them in fixed order, in such a way that each area is always next to the same area and in a neighbouring sign.

Nature has placed each of these labours in the same 75  
 position as a sign of the zodiac, but not in such a way that they  
 remain forever in the one position in the zodiac or are reckoned  
 as being in the same place whenever they are being used to calcu-  
 late any geniture. Nature has rather ordained that they should  
 receive their own proper places according to the time of birth  
 and that they should change signs, and that each part should be  
 in a different sign at a different time and thus the geniture 80  
 should assume a new form within the zodiac, without confusing  
 everything by its indeterminable movement. When the Part placed  
 in the first position has been assigned its proper abode at the  
 time of birth, the rest come after, cleaving to the following 85  
 signs. They follow their leader in order until this circle of  
 Labours has completed the circle of the zodiac. According as the  
 seven planets in their courses exert beneficial or malign influ-  
 ences on this sequence placed throughout the signs, this sequence  
 upon which the entire fortune of man depends, as you will learn,  
 and according as the divine power moves the sky on its pivots, so 90  
 a favourable or unfavourable fate will result in each case and  
 one can expect the outcome of such and such an undertaking to  
 accord with it. All these things I must sing of in due order and  
 mark them with their proper titles and give the positions of  
 their contents, so that the configuration of Labours, their name

and character may be plain.

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The first place is given to Fortune. In our science it is called by this title because it contains in itself the basic elements of a household and everything pertaining to a household; how many slaves a man will have, how many fields and how great the size of the works he may build, all this subject to the agree- 100  
ment of the planets of the gleaming sky. After this comes the place of military service, where whatever generally happens to men in arms or serving in foreign cities is included under one title. The third station must be reckoned as pertaining to work 105  
in the city. This too is a kind of military service, made up of civil activities. It holds the bonds controlled by good faith; it forms friendships and services that often prove useless and shows what reward comes from the cultivation of friendship when the zodiac, due to the position of the planets in it, is in har- 110  
mony with this undertaking. Nature has placed judicial activities and the fortune of the Forum in the fourth place, the advocate pouring forth words, the defendant depending on his eloquence ...<sup>(1)</sup> and laying bare to the people the obscurities of the law and with his brow resolving disputes after careful consideration, 115  
since as a judge of the truth he calls on nothing more than the truth. Whatever eloquence can achieve when laws are proposed lies solely in this part and obeys it according as the dominant planets direct. The fifth place among the signs is given to marriage and alliances and...<sup>(1)</sup> is joined together and an alliance joining 120

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(1) The text is corrupt.

friends. Rich abundance is counted in the sixth abode and the  
 preservation of property is joined to it; of these, one advises  
 how much wealth a man will be blessed with, the other how long it 125  
 will last, according as the planets direct their powers and the  
 parts of the dodecatropos modify them. The seventh is reckoned  
 as bristling with terrible dangers, if the influence of the  
 planets in their position in the signs is malign. The eighth is  
 held by Fame, on which one's social station, the amount of fame  
 one receives, one's family and influence coming from one's mani- 130  
 fest consequence depend. The ninth place holds all the doubts  
 and uncertainties that beset the lot of children, the worries of  
 fathers and all that which nurtures infants. The neighbour to  
 this controls the management of life: from it we derive our 135  
 characters. It determines on what pattern each household will  
 be formed and how the slaves should, each in his own place, go  
 about their several tasks. A specially important lot is placed  
 in the eleventh part: it continually governs the whole of us and  
 our powers and determines our health, making us now free from ill- 140  
 ness, now weighing us down with it, according as the planets  
 influence the heavens. There is no other abode which claims as  
 its own the determining of the time or type of medical attention.  
 There is no better time than when this abode is influencing the  
 geniture to mingle health giving liquids for the preservation of  
 life. The last Labour, which by its position finishes the whole 145  
 series, is devoted to acquiring things. It holds all the outcome

of wishes and ensures that the studies in acquiring skills which each sets before himself and his children do not prove useless. Whether he carries out his duties with flattering nods for all or essays fiercely insulting language in law suits in the Forum 150 or seeks his fortune at sea or in a sailing ship blown by the wind, or a full harvest of grain surpassing expectation or strives to make wine from the thick, rich juice flowing from the pressed grape, the proper day and moment for action will be given in this part, if the planets as they follow through the signs agree. I 155 will expound their powers for good or bad methodically when I begin to lay bare their effects. But now, so that a discourse on mixed themes should not confuse the reader, it is sufficient to give a mere outline.

Since we have gone through the circular arrangement of 160 labours, giving their names and all their effects in order (The Greeks call them Athla. They contain all human activity divided into twelve distinct categories), I must now declare what signs they are coincident with at any particular time. For they do not 165 always keep the same abode among the same signs for every nativity, but they change according to the time, moving now hither, now thither, through the zodiac, keeping however their fixed order. Come then, so that you do not calculate the geniture incorrectly through an error in determining the position of the athla, if you want to attribute each Labour to its proper sign, find the posi- 170 tion of Fortune among the signs. [ It is the first part I have

mentioned under the numerous Athla<sup>(1)</sup>. ] When you have found it  
 by sure reasoning, reckon the rest of the athla as coincident  
 with the signs following, in the order already given. Then each  
 athla will be found to have its proper abode. So that you do not 175  
 begin to look for the place of Fortune unmethodically, here are  
 two ways in which you can find it for certain. When you have  
 marked the time of birth, the position of the heavens then and  
 the position of the planets in the signs, if Phoebus in his jour-  
 ney is above the two horizontal pivots, - the one which holds him 180  
 when he rises and the one which plunges him into the waves, you  
 may assert that a man has been born in the day time. But if  
 Phoebus gleams among the six signs below the horizon, lower than  
 the pivots holding the celestial sphere on the right and the left, 185  
 you will be able to say that he has been born in the night time.  
 When you have carefully noted the difference between these two,  
 then if the nourishing day has received him as he is born, calcu-  
 late the number of degrees in the signs in order from the sun to  
 the moon, then mark off the same number of degrees from the eastern  
 cardinal point, which men call the horoscope and find by accurately 190  
 dividing the signs. At whatever sign the number of degrees ends,  
 reckon that as the sign of Fortune. Then join the other Athla to  
 their signs, all in their fixed sequence. But if a man has come

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(1) 172 Reading pars est numerosis and deleting the line (with Bentley). Housman reads est aerumnosis pars and retains the line.

from his mother's womb when night has crept over the earth and 195  
 covered it with his black wings, change your direction, just as  
 the order of nature changes. In these circumstances look for  
 Phoebe, who ever reflects her brother's light and rules during the  
 night, the time that is her own; the gleaming horoscope bids you  
 count from it as many degrees and signs as Phoebus is distant 200  
 from the moon. Fortune holds this place, the other Athla follow-  
 ing it, in the order in which they are all placed by nature.

Perhaps you want to know this as well - something re-  
 quiring an alert mind to discover - how you can discover the true  
 place of the horoscope of a newly born child, which rises at the  
 moment of birth from the part of the sky submerged beneath the 205  
 earth. Unless you look at this method carefully and remember it,  
 the foundation of our science collapses and the system loses its  
 consistency. The reason is that, if the position of the pivots,  
 which control everything, has been wrongly determined, the sky  
 presents a misleading appearance and, because the pivot is calcu-  
 lated to be in a different position, the position calculated for  
 the signs varies also. To discover the true configuration of the 210  
 sky, revolving perpetually from one sign to the next and so trav-  
 ersing the whole of the zodiac with its curved arcs and to deter-  
 mine definitely what its outward appearance, that shows its inmost  
 nature, is and the position of the smallest part of such a great 215  
 mass, determining what part holds the eastern horizon, what the  
 heights of high heaven, what part takes the setting orb, < as it

sinks in the waves of the sea } away from our view and what part  
 has its abode at the lowest point of the sphere of the heavens,  
 this is a task as difficult as it is important.

I have not forgotten the common method of reckoning,  
 which allows two hours for the rising of each sign and reckons  
 that since the signs are equal in length, they take equal times  
 to rise. In this way the calculation starts from that part of 220  
 the sky where Phoebus' course begins and is made by whole signs.  
 It ends at the time of birth and the sign in which it is com-  
 pleted is said to be that which was rising at the time of birth.  
 But the circle of the ecliptic lies at an angle to the equator; 225  
 some signs rise inclined towards the horizontal, but others rise  
 in a direction closer to the vertical, according to whether they  
 are nearer to us or further away. The Crab sets scarcely any lim-  
 it on the period of daylight; Capricorn, winter's sign, scarcely  
 brings it back at all; the arc traversed by the sun in summer is  
 as long as that it traverses in winter is short. The Balance and  
 the Ram make day and night equal. Thus those signs in the middle  
 conflict with those at the extremes and those at the bottom with  
 those at the top. The length of the night varies just as much as  
 that of the day and only every six months does the same state of  
 affairs exist. When the lengths are so unequal, the duration of 235  
 the day and shadow differing, who could believe that all heaven's  
 signs take the same time to travel into the ether? You may add to  
 this, moreover, that the length of an hour is not fixed and that

the hour of no day is the same as that of the day before, but that, just as the total time of daylight varies, in the same way its parts increase and in turn decrease, while all the time whatever sign a day is under, it has six degrees above the earth, six below. Hence it is not possible for all the signs to take two hours to rise, because the length of an hour is not constant, the hours of different days being at variance with one another, that is, if you reckon that there are twelve every day, a number that their theory should admit, but their practice forbids. 240 245

You will not be on the track of the truth unless you divide both night and day into equal hours and know how long both last at different times of the year and unless your calculations are first based on a determined hour - that which, while increasing and decreasing, holds in level scales the night and the day. This occurs either in the Balance, when night begins to outstrip day, or in midspring, when night begins to yield to day. For only then are the two periods equal, each extending for twelve hours, because Phoebus is travelling in the region of the equator. When he has moved into the south during the cold winter time and gleams in the eighth part of twiformed Capricorn, then the day is cramped and has only nine and a half equinoctial hours, while night, unmindful of day, has twice seven and an additional half an hour so that the total will not be short. In this way the total established by nature can be divided into lots of twelve hours - the lots of day and night - and adds up to the full amount. From this 250 255 260

point the nights grow shorter and the days grow in length until they come in their rivalry to the sign of the burning Crab. And then, reversing their behaviour, their hours change into the hours of winter: then the days again become equal in length to the winter nights, the nights equal to the winter days and thus day and night are longer than each other in turn [driven now a certain distance in one direction, now in the other in the signs. A clear explanation has been obtained through our science and will be given in its proper place in the poem.] This is the length along those shores which the River Nile, heavy with summer flood, waters, imitating the planets by its outflow through seven mouths, which put the sea to flight. 265 270

Come now, learn with attentive mind how many stades and how much time each sign takes to rise or set, so that what will be of great advantage may not lie hidden in my brief utterance. The well known constellation of the Wool Bearer, whom all follow, when rising takes with it four times ten stades, twice that when setting; it occupies when rising an hour and a third, double that when setting. The other signs when rising into the sky take another eight stades each and lose as many when sinking into the cold shadows. The hour increases by an additional quarter for each sign when it is rising and a third of a fifth of that quarter is added as well. These are the increments which each sign up to the Balance receives as it rises. Losses are incurred at the same rate when they set. From the Balance, the times the signs 275 280 285

take to rise and set returns towards the situation existing in the Ram, with the same differences between signs, except that the increments become losses and vice versa. For example, the Balance takes as many stades or hours to set as the Wool Bearer to rise. 290  
 The space or time the Ram occupies when setting, the Claws take to rise. The signs which follow the Balance alter in the opposite way from the signs mentioned above. When you have stored this in a wakeful mind, it will then be easy for you to discover what sign 295  
 is at the Horoscope at any time, since you may calculate with certainty the time each sign takes to rise and assign to each its correct number of hours, the calculation by means of the stades, whose total in each sign I have given, being made from the sign where the sun is. 300

But the length of day and night is not the same in every land, nor do the times the signs take to rise and set alter by the same amounts. The principle is the same, but the rates of change are different. For where the fleece of the Phrixean sign and the faithful Claws - the Scales of the just Balance - are 305  
 drawn through the heavens, all the signs take two hours to rise, because the sky is divided in the middle by a perpendicular array of signs<sup>(1)</sup> and turns evenly upon the axis at right angles to them. Here the dark nights are joined to the days in everlasting peace: an equal amount of time is granted to each, nor is the falsehood 310  
 of the false world here plainly revealed, but nights of similar

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(1) 307 Reading praeciditur. Housman reads praecingitur

duration succeed each other through all time. All the signs enjoy the same autumn and spring, because in all of them Phoebus travels on a path of the same length at the same speed. It does not matter there<sup>(1)</sup> in what sign Phoebus is travelling - whether he is parching the Crab who lives on the shore or whether he is travelling in the sign opposite it, [or in the signs in the middle of them or between these four,] because although the zodiacal circle touches three circles at an inclination, nevertheless the sections containing each sign rise above our heads and descend towards the earth in an array perpendicular to the horizon and rise at equal intervals each journey. There, the sky is half hidden and half revealed, because its sphere is evenly divided. But as soon as you travel away from that part of the earth, the nearer your steps carry you to one of the poles at the extremities of the earth, in your journey over the convex slope of the earth, which nature has formed into a swelling globe with a smooth even surface and suspended in the middle of the universe from whatever side you look at it, in travelling away from the equator, you are equally ascending and descending. One part of the earth eludes your field of vision, the other duly presents itself. Now, how much the path of the travelling zodiac is inclined depends on how much the earth's surface is inclined<sup>(2)</sup>. The signs, which just now rose vertically, will be carried into the ether in a course at an angle to the vertical and the belt of the signs, which used

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(1) 315 Reading illic quo sol. Housman reads tunc quo Phoebus.

(2) 330 Reading inflexerit orbis. Housman reads inflexeris orbem.

to extend straight across the sky, will be tilted away from us. This is because its position is ever the same. It is our position 335 which changes. Therefore the times too, reason compels us to admit, change and make the length of day different in such a region, because the signs slant away from us as they travel, in courses they but grudgingly allow us to see and some signs lie nearer to 340 us than others, others further away. The length of their course depends on their distance from us: those which rise nearest to us are seen describing long arcs in the sky, those which gleam furthest from us are swiftly swallowed by the waters. The nearer one travels to the frozen Bears, the more the signs of winter elude one's gaze and they set when they have only just risen. As 345 one travels further, one by one each is hidden with all its parts, each adding the length of thirty equatorial nights to the arctic night and taking away as many days. In this way the length of day diminishes and, as its number of hours decreases, is consumed 350 and gradually perishes, as the signs flee further away. Then more signs will be sought in vain, being hidden by the swelling in the middle of the earth and the length of the day will ebb away little by little. These signs will at the same time hide Phoebus and weave a mantle of darkness, until the year is weakened through 355 having whole months snatched away. If nature allowed one under the pole of the heavens, which the frozen axis supports with its unyielding pivots, to travel over the eternal snow, a world stiff with cold, which looks upon the Lycaonian maiden with her breast

nearest the earth, the heavens would be seen to be standing up-  
 right, only their sides travelling, spinning around in an upright 360  
 position like a top. Only six signs will be visible to you as they  
 travel in their course inclined to the vertical and they will  
 never be invisible, but the semi-circle containing them, meeting  
 the horizon at an inclination to the vertical, will travel around  
 the bulge at the centre of the earth. At the pole there will be  
 one day for six months on end, occupying half a year with its days 365  
 woven together, since Phoebus will never set in all that time,  
 while he is travelling through these six signs in his course, but  
 in his journey around he will be carried in a circle parallel to  
 the horizon. As soon as he descends headlong from the equator, 370  
 seeking the lower regions with his chariot<sup>(1)</sup> directed downward,  
 and, bending forward, gives his horses the rein, night starts,  
 under the pole of the heavens, and continues for as many months as  
 the day lasted, joining the shadows in one long night. For who-  
 ever looks at the whole round sphere of the sky from the pole of 375  
 the earth, sees only half of it. The lower half is hidden, nor  
 can a straight line of sight go round it; it is divided into hem-  
 ispheres by the paunch in the middle of the earth<sup>(2)</sup>. Hence,  
 while he is travelling in the six submerged signs, Phoebus escapes  
 the gaze of one looking from the pole and at the same time hides 380

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(1) 371 Reading curru. Housman reads cursu.

(2) 377 Reading terrae. Housman reads que tenus.

his light from the signs and leaves darkness in its place, until he returns from beneath the horizon for as many months as he was absent and ascends again towards the twin Bears. This place - the pole - divides the year into two pairs of day and night, each pair occurring in one of the divisions formed by the dividing of the earth.

Since I have expounded how much the period of night and 385 that of day vary, and why, hear now how many signs per hour rise or set in any place, so that you may be able to determine the exact time at which each degree of a sign is on the horizon and the horoscope may not be falsely determined as a result of inaccurate calculations. The following must be followed carefully as a 390 general rule, because the exact number of hours each sign takes to rise and the number of stades in it cannot be given, since they vary so much. Let each man begin to follow the road I have laid down; let each one follow and travel at his own pace, taking the method from me. In whatever part of the world a man makes this enquiry, he should determine how many hours the day and night 395 have under the Crab, when the days are longest and surrounded by the shortest periods of shadow and attribute a sixth of the length of the day, whatever it may be, to the time of rising of the neighbouring Lion, who occupies the position after that of the Crab. Whatever was the length of the darkness of night should be 400 divided in the same way into as many parts and the length of one should be given to the period of rising of the Bull, the sign

which rises with his hind quarters uppermost. Divide the difference between this period and that which the Nemean Lion receives into three, so that the Twins receive one third, this being the amount by which their time is greater than the Bull's, the Crab another and the Lion a further third, but with the definite proviso that they keep intact the number of parts in the preceding sign and increase it with these increments. In this way the total number of hours which you attribute to the Lion to rise will be calculated as the same as that which the Lion received in the division of hours made a little before. The time the Maiden takes to rise should be calculated as greater than that taken by the Lion by the same amount. You will find that the time the signs take to rise increases by this number of parts of an hour until the sign of the Claws. From the Balance it decreases by the same amount. Some signs take a certain period less than two hours to rise, some take a certain period more. The former take the same period more than two hours to sink into the shadows, the latter the same period less. Using this method, you should work out how long every sign of the zodiac takes to rise and set. 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995 1000 1005 1010 1015 1020 1025 1030 1035 1040 1045 1050 1055 1060 1065 1070 1075 1080 1085 1090 1095 1100 1105 1110 1115 1120 1125 1130 1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280 1285 1290 1295 1300 1305 1310 1315 1320 1325 1330 1335 1340 1345 1350 1355 1360 1365 1370 1375 1380 1385 1390 1395 1400 1405 1410 1415 1420 1425 1430 1435 1440 1445 1450 1455 1460 1465 1470 1475 1480 1485 1490 1495 1500 1505 1510 1515 1520 1525 1530 1535 1540 1545 1550 1555 1560 1565 1570 1575 1580 1585 1590 1595 1600 1605 1610 1615 1620 1625 1630 1635 1640 1645 1650 1655 1660 1665 1670 1675 1680 1685 1690 1695 1700 1705 1710 1715 1720 1725 1730 1735 1740 1745 1750 1755 1760 1765 1770 1775 1780 1785 1790 1795 1800 1805 1810 1815 1820 1825 1830 1835 1840 1845 1850 1855 1860 1865 1870 1875 1880 1885 1890 1895 1900 1905 1910 1915 1920 1925 1930 1935 1940 1945 1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055 2060 2065 2070 2075 2080 2085 2090 2095 2100 2105 2110 2115 2120 2125 2130 2135 2140 2145 2150 2155 2160 2165 2170 2175 2180 2185 2190 2195 2200 2205 2210 2215 2220 2225 2230 2235 2240 2245 2250 2255 2260 2265 2270 2275 2280 2285 2290 2295 2300 2305 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415 2420 2425 2430 2435 2440 2445 2450 2455 2460 2465 2470 2475 2480 2485 2490 2495 2500 2505 2510 2515 2520 2525 2530 2535 2540 2545 2550 2555 2560 2565 2570 2575 2580 2585 2590 2595 2600 2605 2610 2615 2620 2625 2630 2635 2640 2645 2650 2655 2660 2665 2670 2675 2680 2685 2690 2695 2700 2705 2710 2715 2720 2725 2730 2735 2740 2745 2750 2755 2760 2765 2770 2775 2780 2785 2790 2795 2800 2805 2810 2815 2820 2825 2830 2835 2840 2845 2850 2855 2860 2865 2870 2875 2880 2885 2890 2895 2900 2905 2910 2915 2920 2925 2930 2935 2940 2945 2950 2955 2960 2965 2970 2975 2980 2985 2990 2995 3000 3005 3010 3015 3020 3025 3030 3035 3040 3045 3050 3055 3060 3065 3070 3075 3080 3085 3090 3095 3100 3105 3110 3115 3120 3125 3130 3135 3140 3145 3150 3155 3160 3165 3170 3175 3180 3185 3190 3195 3200 3205 3210 3215 3220 3225 3230 3235 3240 3245 3250 3255 3260 3265 3270 3275 3280 3285 3290 3295 3300 3305 3310 3315 3320 3325 3330 3335 3340 3345 3350 3355 3360 3365 3370 3375 3380 3385 3390 3395 3400 3405 3410 3415 3420 3425 3430 3435 3440 3445 3450 3455 3460 3465 3470 3475 3480 3485 3490 3495 3500 3505 3510 3515 3520 3525 3530 3535 3540 3545 3550 3555 3560 3565 3570 3575 3580 3585 3590 3595 3600 3605 3610 3615 3620 3625 3630 3635 3640 3645 3650 3655 3660 3665 3670 3675 3680 3685 3690 3695 3700 3705 3710 3715 3720 3725 3730 3735 3740 3745 3750 3755 3760 3765 3770 3775 3780 3785 3790 3795 3800 3805 3810 3815 3820 3825 3830 3835 3840 3845 3850 3855 3860 3865 3870 3875 3880 3885 3890 3895 3900 3905 3910 3915 3920 3925 3930 3935 3940 3945 3950 3955 3960 3965 3970 3975 3980 3985 3990 3995 4000 4005 4010 4015 4020 4025 4030 4035 4040 4045 4050 4055 4060 4065 4070 4075 4080 4085 4090 4095 4100 4105 4110 4115 4120 4125 4130 4135 4140 4145 4150 4155 4160 4165 4170 4175 4180 4185 4190 4195 4200 4205 4210 4215 4220 4225 4230 4235 4240 4245 4250 4255 4260 4265 4270 4275 4280 4285 4290 4295 4300 4305 4310 4315 4320 4325 4330 4335 4340 4345 4350 4355 4360 4365 4370 4375 4380 4385 4390 4395 4400 4405 4410 4415 4420 4425 4430 4435 4440 4445 4450 4455 4460 4465</

What is left when this amount is taken away, divide into six equal parts. Give one sixth to the fiery Lion. Then, of the number of parts which stand to the credit of night, the part already mentioned should be given to the sign of the Bull. Of what is more than the latter part and less than the former - the difference between these amounts, - give a third part to the Twins in addition to the amount given to the Bull. Then the others will follow with the same increase, always keeping the preceding number and increasing their neighbour's total with a new grant, until they come to the sign of the just Balance: from it the signs are shortened in the same way, through as many parts, to the borders of the Wool Bearer; all the signs when setting increase or decrease by the same amounts, but in reverse order. This method will show you how to reckon the total number of stades in each sign and calculate the time each sign takes to rise. When you have understood this properly, together with the number of hours belonging to each sign, you will never fail to find the horoscope, wherever it may be, since it will be possible to allot to each sign its proper amount of time, starting from the place Phoebus holds.

Now to expound in what stages the months of winter begin to increase. (Their increase until they touch the snow white fleece of the sign which compels the light and the shadows to bear an equal yoke does not take place in equal steps through all the signs). This involves a considerable amount of calculation, but must be treated briefly. Firstly you must discover the length in

hours of the shortest day and the longest night which Capricorn  
 holds. Of the part given to the shadows of night above their 450  
 even share - the part which the daytime has lost - a third must  
 always be given to the sign in the middle. With this allotment  
 the sign in the middle is more than the first and less than the  
 third by a half of itself. Divide the whole time into parts in  
 this way. The three signs have these resources; but give the 455  
 total of the first sign and the sign in the middle to the follow-  
 ing sign, so that, if, for instance, a winter night is six hours  
 longer than the day, Capricorn increases the daylight by half an  
 hour, Aquarius himself on his own account adds an hour, joining  
 that to the previous total. The Fishes on their own account 460  
 establish as great an increase as they receive from the previous  
 sign, and, making a total increase of three hours, hand to the  
 Wool Bearer night and day for it to make equal in the time of  
 spring. The divisions of time begin with a sixth; the middle 465  
 sign of the trio trebles the amount it has received, the last  
 doubles it. Thus is their proper total returned to the days;  
 the nights, made equal, are freed from their debt and begin in  
 their turn to yield amounts of their own ever lessening time to  
 the days - their roles reversed. For the Ram takes as many hours  
 from the nights as the Fishes before him took away on loan and 470  
 added to the column of debts they owe; an hour is given to the  
 Bull, and so that it may increase the loss night has already  
 suffered, the Twins add half of that. In this way the last cor-  
 responds to the first and in the same way those which shine next

to them and those in the middle are reckoned as having equal 475  
 effects [and have special effect in altering times.] With these  
 changes the nights decrease from the sign of winter, the days in-  
 crease and the cycle of the year reverses until the solstice  
 occurs under the sign of sluggish Cancer. Then the night acquires 480  
 the same length as the winter day and the day the same length as  
 the winter night and then returns to its former state in the same  
 stages as it grew.

This method too can lead one to the sign which is rising  
 at any moment, in other words, that which is being released from  
 the sea and restored to the sky. Observe what is the hour of the  
 day, if you are seeking it by day and keep adding the number of 485  
 this hour to itself until you have multiplied it by ten, adding  
 however five additional amounts to the total so obtained, because  
 during the hour of any season the signs of the zodiac rise fifteen  
 degrees. When that number has been obtained, remember to add to 490  
 it as well those parts which Phoebus has already traversed in his  
 journey through the signs. From this total distribute thirty  
 parts to each sign, the first lot to the sign in which Phoebus  
 gleams, then to all the others which follow the sun. Then the  
 sign on reaching which the total is consumed and the degree in 495  
 which the total ceases altogether, will be respectively the heav-  
 enly shape whose stars were rising at the time of birth and the  
 exact degree rising then. < But if the birth falls by night, in  
 noting the hour, reckon its number from sunset, not from sunrise.

Instead of taking the position of the sun, take the point of the zodiac diametrically opposite the sun and count how many  $\rangle$  parts  $\langle$  this interval  $\rangle$  contains<sup>(1)</sup>. When you have arrived at the combined total, give thirty parts of it to each sign, until there is nothing left of the total. At whatever degree of a sign this occurs, you may be assured that that part was rising at the same time as a man was born and with its fires saw the world at the same time. This is the way you should look for the definite position of the horoscope, the birthplace of the sky, among the swiftly moving signs, so that, when you have accurately calculated the position of the first cardinal point, neither the slopes of high heaven, nor the point at which the swift stars set can deceive you, the foundations at the bottom of the heavens are firm [and so are the true setting<sup>(2)</sup> and rising points of the planets] and the signs are allotted their proper influences and Athla. 500 505

Now I will expound to what sign each division of the units of time belongs. The signs are even divided and allotted their own proper years, months, days and hours of the day, in which they show forth their own special influences. The first year, you will find, belongs to the sign in which the sun shines at nativity, because he takes a year to travel through the zodiac. The next and the rest follow the following signs. The Moon gives months, because she takes a month for her journey; the horoscope 510 515

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(1) I have supplemented the lacuna with Housman's words (on page xxi of his introduction to Vol. 3)

(2) Reading obitus. Housman reads ortus.

claims as its own the first day and hour and gives the following  
to the following signs. In this way nature has willed that years,  
months, days and even hours should be distributed among the signs, 520  
so that each unit of time should be divided among all the signs  
and should give a different character to the signs as it moves  
through them in turn and meet each sign as the signs travel through  
their cycle of changes. There is so much discord in the world  
throughout our lives, bad is mingled with good and weeping follows 525  
joy, because fortune does not stay the same for anyone<sup>(1)</sup>, so  
diverse is she in her course, nowhere remaining the same. She has  
lost men's confidence in her by making each period of time differ-  
ent from the preceding as it travels through the signs. Years are  
never the same as the year before or months as the month, the very 530  
day is different from the one before and ever seeks itself in  
vain, nor is one hour ever brought forth the same as the preced-  
ing. The times, consisting of all the units of time as it speeds  
along, are different, each obeying its own sign. They make our  
dispositions<sup>(2)</sup> such and threaten misfortunes such as are the 535  
signs with whom we are travelling at the time.

There are those who like to make all their calculations  
on periods of time and signs from the sign on the edge of the  
rising heaven, the sign which the discoverers of this science  
call the horoscope, because from that part the hours are marked

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(1) 527 Reading quod in nullos. Housman reads nec in cunctos.

(2) 535 Reading mentes. Housman reads menses.

off for the days. They consider that the months, years, days, 541  
 and hours have their beginning in this one place only and are  
 then allotted to the following signs and that, although all these  
 units of time share a common origin, nevertheless they differ, in  
 that some complete their cycle more slowly, others more quickly.  
 The hour comes to all the signs once in the one day, the day 545  
 comes twice in a month, the month once in a year and the year  
 once in a cycle of twelve suns. It is difficult for all the  
 cycles to coincide, so that a month, year, <day and hour are in the  
 one sign at the same time. The order is at variance with itself.  
 Indeed, it often happens that a man who is experiencing the year  
 of a mild sign > is living through the month of a harsh one, or 550  
 that, if the sign under which his month falls is benign, the sign  
 of the day is malign, or if fortune favours the day, the hour is  
 an unfavoured one. Therefore it is not correct to consider any  
 correspondence in isolation - that of the year with the sign, or  
 the month with the passing years, the days with months or all the  
 hours with the days, because sometimes the periods of time are 555  
 travelling on ahead too fast for that, sometimes lagging behind  
 and one period of time sometimes corresponds with another, some-  
 times fails to do so, sometimes falling behind it, at other times  
 catching up with it. One period of time varies from another and  
 its tenor is interrupted when the position of the days is changed.

Since I have taught what type of life occurs at any 560  
 time with respect to every unit of time and to what sign ~~each~~

each year, month, day and hour belongs, I must now expound another system, that which tells the total life span - how many years each sign gives. This system must be heeded and calculations made using it when you want to discover the end of life by means of the signs. 565

The Ram gives twice five years and one more, less a third. The Bull excels him by the addition of two, but falls short of the Twins by as many. The Crab gives twice eight plus two thirds, the Nemean Lion twice nine and an additional two thirds. Erigone doubles ten and a third. The Balance's years are no more than the Maiden's. The Scorpion is the equal of the Lion in the gifts he gives. The Centaur's grant is the same as the Crab's. Capricorn would give thrice five, if four months were added. Aquarius 575

trebles four years and extends life for eight months further. The Fishes are the Ram's neighbour both in position and allotment of years. They give ten courses of the sun and eight months. 580

It is not enough to know the number of years each sign gives in order to know how long a man will live: the regions into which the sky is divided also have their own gifts and give their own allotment of years, with fixed amounts between them, provided that the configuration of the planets is beneficent. But 585

I will now only sing of the powers of the regions; presently I will treat the effects of all these influences in combination, when the fundamentals of the matter are well understood, without any confusing interposition of the particular parts. If the moon is situated with beneficent influence at the first cardinal point, 590

where the zodiac returns to the earth and if she holds the horizon and is rising, this point will give a man ten times eight years, with two taken away. But when she takes her position at the topmost summit, this number is deprived of three years. The western cardinal point would have a wealth of twice forty cycles of the sun if the number of years in one Olympiad were not lacking to the number. The lowest point of the foundations is reckoned as having twice thirty years, with twice six harvests added to the span. The region which rises before it and is the right hand member of the Horoscope's triangle, gives sixty years and adds twice four. The triangular region on the left of and following the preceding signs doubles thirty years and adds three more as well. The place which is second above the sign which first rises from this cardinal point and is the nearest to high heaven, multiplies twenty years by three, taking away three. The one that comes below it, divided by an equal space, completes its gifts in the space of fifty winters. The place the rising Horoscope is above, reckons up four times ten periods of the sun travelling in its course, heaps on two more revolutions and abandons a man when still young. But that which precedes the area of the eastern cardinal point gives twenty three years to those born under it, snatching away a man in the flower of his scarcely tasted youth. The region above the western cardinal point concedes thrice ten years and, by adding three, adds a tenth of this number to increase them. The region below ends the life of one yet a child.

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Twelve birthdays are over when his body, not yet fully grown, is carried out to death.

However, the signs which are situated opposite each other in the zodiacal circle and divide that circle into even quadrants, must be noted and remembered with special care. Men call them the tropical signs, because in them the four seasons of the year make their turns, loosening the knots that bind them, change the whole sky as it turns on its axis and introduce different kinds of human toil and natural phenomena. 620

The Crab gleams at the top of the summer region, lengthening the day to its greatest extent and making it decrease slightly, increasing the nights by as much time as it has deprived the days. The combined total remains the same. Then men hasten to strip the grain from its slender stalk, the Campus makes men's limbs ready for various athletic activities and the warm sea reclines on the becalmed waves<sup>(1)</sup>. Then cruel wars are fought with savage battles and winter does not defend Scythia. The Germans then flee, for their land is dry. The Nile overflows into the fields. This is the state of the world when Phoebus stands still at the sign of the Crab and turns at the top of the heavens. 630 635

From the opposite part Capricorn compels sluggish winter to have the shortest day and longest period of night and then extends the day and dispels the darkness, taking time from one and supplying it to the other. Then every field is frozen, the sea 640

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(1) 631 Reading pacatas. Housman reads iactatum.

closed to shipping, encampments stay put, the sweating rocks cannot endure the depths of winter. Nature stays in the one spot and rests a little while.

Nearest to them in effect and similar in the changes they produce are, they say, the signs which make the days equal to the periods of darkness. The Ram holds Phoebus as he seeks again the sign of the Crab. The Ram lies half way between the beginning and the end of Phoebus' return journey to the Crab, and joins the seasons in concord at the division of the sky. He changes the process according to which, from the sign of the Balance, the length of the day is outstripped, and bids day to overcome in turn and night to succumb, until they come to the sign of the summer Crab. Then for the first time the sea is made smooth and the waves gentle. The earth dares to blossom with flowers, the tribes of beasts and birds eagerly copulate and give birth amidst the rich food. Every grove sounds with tuneful voices and grows green with foliage everywhere. To such is nature moved by the power of this sign.

Opposite it shines the Balance, whose season is similar, for it makes night and day equal. But there is this difference between the signs. The Balance orders night, overcome up to him, to overcome after him, making it increase up to the time of winter. Then the grape descends full of juice from the laden elm, rich must brims over when the grape clusters are pressed, men entrust corn to the furrows, while the earth, freed by autumn's warmth,

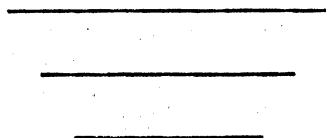
opens up and receives the seed.

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These four too are powerful in our science: by making the seasons change they direct the course of men's affairs in different directions, allowing nothing to abide in its first abode. But these changes do not take place equally through the whole of each sign, nor are the seasons of the year changed by the full sign. One day in each season makes night equal to itself, while the Balance and the Ram give their character to autumn and spring: only one day is the longest in the entire sign of the Crab; only one night equal to it occurs in the sign of Capricorn. The other times now press upon their rivals, now yield in their turn. There is, then, but one degree in the tropical constellations that you should observe. It influences the world, making the seasons change on earth, causing new things to happen and plans to have unexpected results, reversing everything and then turning it back in the opposite direction. Some place this power in the eighth degree: there are those who prefer the tenth: there was even one authority who placed the alteration and the guiding of the days in the first.

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BOOK 4

Why do we spend the years of our life worrying and torture ourselves with fear and a blind desire for possessions, old from our never ending cares, losing the good things of life by seeking them? Why are we unsatisfied, with no end to our ambitions, ever playing the part of one about to live, but never living? 5

Why is it that every man is poorer because of his property, because he seeks more, not regarding what he has, but only desiring what he has not? Why is it that, although nature demands only a little material for herself to use, by our ambitions we build up the basis of a great fall, buying luxury with our gains and being plundered because of our luxurious way of life and the most prized 10

advantage of money is that it allows one to waste money? Free your minds from such woes, relieve yourself of cares, empty your lives of such causes of useless regret. Fate rules the world. Everything is fixed by an unalterable law and the events of long ages are indicated by sure signs. We begin to die as soon as we 15

are born, and our end depends on our beginning. It is from our nativity that wealth and kingly powers flow and the poverty that comes more often, the skills and characters given to men when they are made, vices and virtues, loss and gain. No one can be without what he has been given or have what he has been denied or 20

by his ambitions seize a lot fate is unwilling to give, or flee the lot that presses upon him. Each man must endure his own

destiny. If fate had not laid down the laws of life and death,  
 would the fires have fled from Aeneas or Troy, safe from des-  
 truction while one man survived, have conquered even in death? 25  
 Would the wolf of Mars have nurtured the exposed brothers or the  
 city of Rome have been born in a row of huts? Would shepherds  
 have brought down the thunderbolt to the Capitolian Mount, or  
 could Juppiter have been contained in his own citadel and the 30  
 world captured by captives? Would Mucius have come back to the  
 city in victory, having quenched the fire with his hand, burnt  
 off as a result, or Horatius alone have blocked the bridge and  
 with it the city to the enemy force arrayed against him? Would  
 a maiden have made null a treaty or three brothers lie beaten by  
 the valour of one? No army has won so great a victory as this. 35  
 The fate of Rome depended on one man, and, although she had al-  
 ready been allotted rule over the world, she was despondent.  
 There is no need to mention Cannae, and an army at the very walls  
 of the city, Lake Trasimene, or how Fabius' delaying tactics and  
 Varro's flight made final victory possible<sup>(1)</sup>, how the citadel of 40  
 conquered Carthage accepted the yoke and how Hannibal, whom we had  
 hoped would die laden with our chains, <having suffered> exile,

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(1) 38-9 Reading quidue tuos, Trasimenne, lacus, Fabiumque morantem/Varronemque fuga nantum qua uincere posset.

Housman reads Varronemque fuga magnum, qua uincere posset/postque tuos, Trasimenne, lacus Fabiumque morantem.

<attoned for his slaughter of so many Romans, and the heaped up  
 funeral pyres he caused> (1) by the death of a fugitive. There is  
 no need either to tell of the conflict of Italian with Italian,  
 Rome fighting with her own members, the civil wars, the Cimbrian 45  
 overawed by Marius, Marius languishing in prison. Although often  
 consul, he was exiled. He was consul after being an exile. He  
 lay among the ruins of Libya, his fall like theirs, and from Car-  
 thage, of which but the foundations remained, he took the city of  
 Rome. If fate had not ordained this, fortune would never have  
 allowed it to come to pass. Who would have believed, Magnus, that 50  
 after you had defeated the forces of Mithridates, had regained  
 control of the sea and earned triumphs for your conquests in the  
 three continents of the earth, and when you could have been the  
 second great general <laid to rest in the royal tomb of Macedonian  
 Alexander,> that you were destined to perish on the shore washed  
 by the Nile and that a fire lit from the timber of a wrecked ship  
 would cremate your body and the remnants of a keel cast upon the 55  
 shore provide your funeral pyre? Who could suffer such a reversal  
 of fortune except through the power of fate? He who was born of  
 heavenly seed and duly received into heaven, when he had put a  
 just end to the civil wars and, after victory, was establishing

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(1) 42 Reading exilium <passum, Romanae caedis aceruos/conges-  
 tos> que rogos furtiua morte luisse. Housman reads exilium-  
que rei furtiua morte luisse.

civilian rule, could not avoid the wounds so often predicted for  
him, but in the sight of all the senate, although he held in his 60  
hand a document denouncing the conspiracy and naming its authors,  
he deleted the writing with his blood, so that fate might have  
its way. What need is there to relate the destruction of cities  
and the fall of kings, Croesus on the funeral pyre, the headless  
body of Priam on the shore, for whom not even Troy provided a  
funeral pyre? What need to tell of Xerxes and the shipwreck  
greater than the sea itself, or the man born of a captive placed 65  
over the Romans as their king, the fire snatched from fire and  
the flame gutting a temple yielding to that heroic man? How  
many sudden deaths occur among the healthy and how many corpses,  
on the other hand, desert themselves and wander through funeral 70  
pyres? Some who have been carried out in funeral processions  
return from the very graves. Some enjoy two lives, others  
scarcely one. A mild disease kills one man, a serious one  
allows another to recover. Skill goes for nothing; forethought  
is beaten, care harms, doing nothing helps; medicine causes dis-  
eases, food harms and poisons do not. Children degenerate from 75  
their parents or prove their superiors and acquire a character  
entirely their own. Good fortune passes away through one man, it  
begins through another. One man is so fired by passion that he 80  
could swim across the sea or ruin Troy, another's brow is suited  
to writing laws. Sons kill their father, parents their sons;  
brothers meet each other in armed combat and wound each other.

Such war is not our doing. Men are compelled to do such terrible things and are driven to punish themselves and mangle each other's bodies. Not every age has borne men like Decius, Camillus or Catto, 85 a man whose spirit remained undefeated in defeat. There is material in plenty, but the law of fate forbids their creation. Poor men do not necessarily receive a briefer span of life than the 90 rich, nor are periods of life for sale even for unlimited wealth, but Fortune hurries funeral processions even out of the houses of the mighty and points out a pyre and establishes a grave even for the highest. How great is her kingdom, which rules even kings! Further, virtue is sometimes unlucky and vice blessed; the ill advised are rewarded with what they want, the wise are deceived. 95 Fortune does not give approval or support to those causes which deserve it, but wanders waywardly through all mankind, not troubling about distinctions. It is plain there is something else, something greater, which constrains and rules us and imposes upon every mortal thing its own laws, giving those born under its sway 100 each his own life span and vicissitudes of fortune. It often mingles the bodies of beasts with parts of those of men. Such offspring do not come from seed; what do we have in common with beasts? What person has gone so far in immoral relations as to be punished with a monstrous offspring? No, the stars make new forms and the heavens sow mingled features. Finally, if there is no 105 such thing as fate, why is it then that a tradition concerning it has been handed down and why is every future event foretold, together with the definite time it will happen? This reasoning does

not have the object of defending evil or of depriving virtue of the gifts given to it as its due reward. For no one shuns poisonous plants any the less because they do not grow of their own accord, but come from definite seed, nor do people find pleasant tasting food any the less agreeable because nature has provided the material, no free will of their own. Even so, the respect due to the achievements of men should be all the greater because they owe their praiseworthy qualities to heaven, and, on the other hand, we should hate evil doers all the more, as born to sin and punishment. It does not matter where crime comes from; it must be admitted that it is crime. This too is a gift of fate, to expound fate in this way.

[Since I have taught this, it remains now to make in fixed order celestial steps, which can lead a poet travelling unsupported on them in a curved path to the stars.]

Now I will expound to you in due order the characters of the signs, their overall nature and their various interests and skills.

The Ram is wealthy from his fleece, prolific of balls of wool, and when he is shorn, since he is again rich with new wool, he will always have hope. Poised between sudden shipwreck and affluence, he will fall through trying to rise. He will bestow for all to use the fleece which gives rise to diverse trades through countless skills, namely collecting greasy wool into balls, separating it again, combing skeins into a thin

thread and drawing them out, buying and selling different types  
of clothes for profit. Without these clothes no races could exist  
- or, at least they would have to forgo luxury. So great is the  
work, that Pallas claimed it for her own hands and deemed it a 135  
worthy occupation and she takes great pride in herself from her  
triumph over Arachne. The Ram will give these interests and sim-  
ilar skills to those born under him and will fashion in fearful  
breasts unsteady hearts ever anxious to sell themselves for fame.

The Bull will dower the countryside with upright farmers 140  
and will be the cause of toil for these peacable men. He will  
give them no reward consisting of praise, but of the fruits of the  
earth. He bends his neck among the stars and he himself asks for  
the yoke for his own neck. When he carries the orb of Phoebus up-  
on his horns, he declares war upon the earth and calls the idle 145  
fields back to be cultivated in the age old way, himself leading  
men's labours. He does not lie down in the furrows or relax his  
body on the dusty ground. He has brought forth men like Serranus  
or Curius and has bestowed the symbols of consular authority in  
the fields and has come from his plough to be a dictator. He  
loves virtue that passes unnoticed. The minds and bodies of those  
born under him are powerful, albeit slow and the boy Cupid dwells 150  
in their brows.

The Twins produce less strenuous activities and a softer  
way of life. Those born under them make various kinds of music,  
uttering harmonious sounds from their mouths, playing upon slender

reed pipes, setting artificial words to the natural sounds of strings. Even their occupation is a delight to them. Far away 155  
do they wish the clash of arms, the bugle and a gloomy old age. They spend the days of their never ending youth in sexual indulgence. They find a way to a knowledge of the stars and by their calculations and measurements attain to a complete knowledge of the heavens and so can tell the positions the stars will be in before they arrive there. Nature succumbs to their genius and is 160  
totally enslaved to them. So many inventions do those born under the fertile Twins produce.

The Crab, who gleams by the post at the cardinal point where fiery Phoebus turns around on being recalled at the topmost point of his journey, holds one of the joints of the sky and causes the length of day to shorten. He is of a parsimonious disposition and wastes on nothing. He bestows on those born under 165  
him various trades and occupations and skill in making money: in investing in imports and marketing them in various cities, in the exporting of corn in ships that sail before the wind with a view to selling when the price has risen steeply, the ability to sell to the world the world's property, the establishment of trading links between countries hitherto unknown to each other, the seek- 170  
ing of saleable novelties in other parts of the globe, the acquisition of sudden wealth from what he charges for articles. He desires the years to pass swiftly for the sake of the capital sum which he has lent and he sells, with the support of Jove, time, a

commodity which he has not produced by his own efforts, for the sweet return that interest brings. His wits are nimble and he is aggressive in securing his own advantage. 175

Who is in doubt about the nature of the monstrous Lion or what skills he gives to those born under his sign? He is ever preparing new fights and new battles with animals and lives on the despoiling and plundering of flocks. These enthusiasms enchain the men born under him: adorning their proud thresholds with skins, hanging up captured booty at the front of their houses, taming the woods by fear, and living on what they have seized<sup>(1)</sup>. 180

Some men, of similar disposition, are not even restrained by the city walls, but they strut in the midst of the city with droves of cattle and hang mangled limbs from the front of their booths, causing slaughter for the benefit of luxurious livers and making a profit out of death. They are prone to sudden burst of anger, but readily abandon their angry moods. They have straight forward sentiments and pure hearts. 185

Those who life Erigone determines when they are born, she will make of a studious nature and form their minds with the learned arts. She will not give ways of acquiring wealth swiftly so much as of investigating the origin and power of the universe. She will give charm of speech and rule over words and eyes of the mind capable of perceiving all things, however much nature hides 189

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(1) 182 Reading rpto. Housman reads uictor.

them and however obscure their causes. From her too will come the swift writer, for whom one letter represents a word, who can outstrip the tongue with his symbols and with these recently discovered abbreviations take down the long speeches of men talking rapidly. But his good qualities are vitiated. Bashfulness impedes him when he is young and the Maiden, keeping his great natural talents in check, restrains his mouth with her magisterial knot. The offspring of the Maiden will not be fertile either. (What is there to wonder about in that?)

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The Claws, which balance the length of the night with that of the day, at the time when the new gifts of the grape, ripe after a year's growth, come forth, give the use of weights and measures and offspring rivalling in their powers Palamedes, who first counted things and established names for the numerals, defining just how much each was and giving each numeral its own symbol. The man born under them will also know both statute and the abstruse natural law and words denoted by tiny marks of abbreviation, what is permitted and the penalty for doing what is forbidden. He will act as the people's permanent praetor on his own threshold. It is most likely that Seruius was born under this sign, for he established laws when he revealed the nature of law itself to the people. Finally, wherever there is anything uncertain and needing a guide, the tongue of the Balance will remove that uncertainty.

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The Scorpion's tail is armed with a sharp sting, with

which, when he leads the chariot of Phoebus through the stars, he turns the soil and mingles seed in the furrows. He makes men's minds burn with eagerness for war and the camp of Mars, their hearts rejoice in the flow of blood, in slaughter as much as in the acquisition of booty. Such men spend even peace time with weapons in their hands: they enter glades and penetrate the forests. Sometimes they wage wild war with men, sometimes with animals, sometimes selling their life to death and a funeral in the arena. Each man acquires an enemy for himself, when war is quiet. Some delight in playing at war (so great is their love of battle) and they learn how to fight in peace time and pursue enthusiasms which give them similar skills<sup>(1)</sup>.

But those whose fate it has been to be born under the twiformed Centaur, delight in yoking fiery horses to chariots and guiding them with pliant reins, in following herds browsing over the whole plain, in setting masters over and taming every kind of quadruped, in winning the compliance of tigers and taking the rage from a lion, in talking to elephants, and, through talk, making these monsters amenable to human skills and capable of providing various entertainments. This is because a man's body is mixed with an animal's in the stars of this constellation and is placed at the top of it. Hence men born under the Archer rule over animals. Because he holds an arrow tensed on a curved bow, he gives sinews to the body, sharpness to the mind, swiftness of movement and an untiring intellect.

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(1) 229 Reading quodcumque paris studium producit in artes.

Housman reads quodcumque pari studium producitur arte.

Vesta fans Capricorn's flames in her sanctuary. From  
 this he derives his interests and skills. Whatever needs fire for  
 its purposes or requires new flames for its tasks, must be reckoned 245  
 under him - that men dig for hidden metals, extracting the wealth  
 hidden in the veins of the earth with fire and double over the  
 material with sure hand, is his gift, as is whatever is made of  
 silver, whatever of gold. It is his gift that hot furnaces melt 250  
 iron and copper and the hearth bakes bread. He adds as well an  
 interest in the marketing of clothes that keep out the cold and  
 keeps throughout the ages the control of winter, from whose time  
 he makes the nights grow shorter, after they have reached their  
 greatest length, and he brings forth a new year, summoning the 255  
 days to increase in length again. From this sign come men who are  
 constantly shifting their property and whose minds swim in a sea  
 of change. The first part serves Venus mixed with crime, but there  
 is a better old age under the Fish which is joined to it.

Youthful Aquarius too, who pours forth a fountain of  
 water from his upturned pitcher, gives skills associated with 260  
 himself: seeing water flowing under the earth and bringing it up  
 out of the earth, drenching the very stars with the waters turned  
 from their courses, making sport of the sea by forming new shores  
 for luxury's sake, making various lakes and artificial rivers and  
 suspending from houses streams diverted from their courses. 265  
 Countless arts abide under this sign - those in which water plays  
 a leading role. Indeed, he will even set in movement a represent-  
 ation of the sky and the abodes of the heavenly bodies and make

this new sky revolve in a circle.. Of the works which come through  
 water and are influenced by fountains. A mild and gentle type 270  
 springs from this sign, with heart undefiled by meanness; he is  
 easily lead into losing ventures; he has neither too little nor  
 too much wealth. This is what the pitcher determines by the flow  
 of its water.

Those whom the last of the twelve signs, namely the twin  
 Fishes, bring forth, will have an interest in the sea. They will  
 risk their lives at sea and make ships and ships' equipment and 275  
 whatever the sea demands from those who want to make use of it.  
 Innumerable skills come from them. There are scarcely sufficient  
 names for them all. There are so many parts of even a small boat.  
 These men also study navigation, which is concerned with<sup>(1)</sup> the  
 stars and gives power over the sea through knowledge of the sky.  
 A helmsman must have a good knowledge<sup>(2)</sup> of the river mouths and 280  
 harbours of the earth and the winds of the sky, he must know how,  
 at one time, to move the responsive rudder in different directions,  
 to reduce the speed of his ship and cause the waves to run off  
 harmlessly, how, at another time, to propel the boat by oars, that  
 is, to dip in the sea pliant oars of stripped wood. As well, the  
 Fishes grant to their offspring the ability to sweep the calm sea 285  
 with their drag nets, to land on the shore of the sea its captured

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(1) 279 Reading quod uenit. Housman reads peruenit.

(2) 280 Reading bene nouerit. Housman reads et nouerit.

population, or conceal hooks in food or destruction in a cage, even to fight unsteady battles with ships at sea and dye the salt sea waves with blood. Those born under them are a fecund race and well disposed to others. They move swiftly and make many changes throughout their life. 290

The twelve signs give these characters and skills to those born under them, each having influence in its own proper field.

Now no sign has power over all of itself. All signs share their powers with certain other signs, each sign having an equal portion, and join with each other in intercourse as though through a celestial commercial treaty. They yield parts of themselves to the signs which occupy them. The Greeks have called this part of our science decanica. The name comes from the number, for each sign, consisting of thirty degrees, and being divided into three parts, gives ten parts of itself to each of the signs that accompany it to form a trio and each sign is inhabited by three signs in regular order. This is the way in which nature abides, shrouded in thick gloom and the truth is in darkness and great uncertainty. The period of apprenticeship is not a short one, nor does the sky like short cuts. The shape of one sign blocks out the others and eludes our vision. It gives a false impression of its own strength and conceals the benefits the others bestow. This darkness must be banished, not from your eyes, but from your inmost mind and God must be made known completely, not superficially. 300 305

Now I will expound what is joined to what and in what order, so that the power of the signs in other signs may not remain hidden. The Ram claims his first part for himself, the second goes to the Bull, the third to the Twins. In this way a sign is divided among the constellations<sup>(1)</sup> and surrenders as many spheres of influence as the masters it has received. There is a different apportionment where the Bull is concerned. It is counted as a property owner in none of its parts. It gives the first to the Crab, the middle to the Lion and the last to Erigone. Nevertheless its own nature remains powerful throughout the sign and mingles its powers with each part. The Balance is the first to take ten degrees of the Twins, the Scorpion takes those adjoining them, the third part belongs to the Archer, no different from the others in the size of his portion, yielding only in position. The Crab offers Capricorn, the sign opposite it, its first ten degrees. It is deemed worthy of a solstice, of which Capricorn too is reckoned as an owner, because it makes its days equal in length to the winter nights and behaves according to a cognate law at the opposite pivot. Aquarius pours forth the fires of the second part and the Fishes follow in the final part of the Crab.

The Lion is mindful of the partner given to him by the law of triangles, receiving the Wool Bearer as leader of his part holders, and then the Bull, a partner according to the quadrilateral arrangement; the third part is reckoned as under the Twins.

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(1) 314 Reading sidera sic inter. Housman reads sic inter denas.

A line bent six times touches the Twins as well as the Lion.

Erigone grants the greatest honour to the Crab, for she grants it  
 the first part; the neighbouring part is left to a neighbour, the 335  
 Nemean Lion. One part only is her own. She is allowed to possess  
 it because the right of ownership is despised by others. The Bal-  
 ance willingly follows the example of the Ram, who, together with  
 it, rules equal days and nights, but in opposite seasons. The Ram  
 controls the yoke of the vernal equinox, the Balance makes the 340  
 shadows of autumn equal to the light. The Balance gives its first  
 part to no sign; its neighbouring part to the following sign, the  
 third total belongs to the Centaur. The Scorpion places Capricorn  
 in its first part, makes him who receives his name from the flow-  
 ing waters master of the second and wishes his last degrees to be 345  
 under the Fishes. The being who threatens to shoot arrows from  
 his drawn bow gives his first degrees to the Wool Bearer under the  
 law of triangles, the middle to the Bull, the last to the Twins.  
 Capricorn is not defiled by the crime of ingratitude, but returns 350  
 its gift to the Crab, and since he has been received by it, re-  
 ceives it in turn and gives it his first part. They say the king-  
 dom of the Lion is joined to this domain and that the last degrees  
 belong to the Maiden. He who rejoices in waters eternally flow-  
 ing from a pitcher, entrusts the rights of rule over his first 355  
 part to the Balance. The Scorpion claims for itself the ten de-  
 grees joined to it, the Centaur holds the last degrees in this  
 youthful sign. Now only the twin Fishes, who complete the circle

of signs, remain. They hand over the possession of the first part in their territory to the Wool Bearer. The Bull is received in the ten intermediate degrees, they themselves take what remains. Just as they are carried around last in the zodiac, so they receive control of the last part of themselves. 360

These calculations uncover the hidden powers of the sky and divide the heavens into more parts, though using the same number of names and, by increasing the number of parts, increase the degree of unity in the heavens. Do not let your mind be deceived by the well known names; these names conceal, they do not reveal the signs to men. The discernment of a keen mind must be directed further: signs must be sought in other signs and in our search their powers must be considered in conjunction. A man will have the character of that part of a sign he is born under and will be considered as born under the sign of that part. You will find this is the law under which men are born in the decans. This is attested to by the different offspring under the same sign and by the fact that in the countless thousands of living creatures that come from the one sign, there are as many different characters as bodies, that a class of beings foreign to a sign comes from a sign foreign to the class and that men and beasts are born in a confused flux from all signs. Plainly the signs have union as a result of their division into more than twelve parts and give different conditions of life to beings born under the signs bearing their names. The Ram does not only love wool or the Bull the 365 370 375 380

plough, the Twins poetry or the Crab merchandise, nor does the Lion only come as a hunter or the Maiden as a teacher, nor does the Balance only have power over measurements or the Scorpion in arms or the Centaur in wild beasts, Capricorn in fire or the Young Man in his water or the Twin Fishes in the sea, but the signs are mixed and allied so as to have several powers. 385

"But", you may say, "you bid me undertake the investigation of a large and subtle matter and once again you are plunging my mind in thick fog just when I thought I was seeing the light clearly". Yes, but it is God whom you are looking for. You are about to attempt to scale the heavens, and, being yourself born under the law of fate, learn of fate and transcend the limitations of your mind and gain possession of the universe. The labour is as great as the reward. Such great prizes are not gained without toil. Do not wonder then at the turnings of the way and the intricate interconnections of things. It is enough for us that we were allowed to enter this road. Let the remaining effort be ours. 395

Gold will escape you unless you dig through mountains. The earth is heaped upon its own wealth and thus obstructs one attempting to get it. To acquire gems, men traverse the entire earth, nor is it too much trouble to sail the sea when precious stones are the reward. Anxious farmers will make every possible vow every year and how little will the deceiving countryside produce! We seek profit with the help of the winds and follow Mars to get booty. 400

We should be ashamed at our desire for perishable goods at a cost

as great as this. Men take service in the cause of luxury; the belly lies awake in order to destroy its owner and spendthrifts often sigh for their ruin. What shall we give to buy heaven? What is the selling price of the universe? Man must be expended, so that God may dwell in him. 405

This is the law according to which you must mark the characters of those born. It is not sufficient to learn the signs dominating signs through the ten degree divisions and what signs are grafted upon each. You must also remember to observe each degree of each sign, noting which are stiff with ice, those which fire has parched, those which are sterile, though suffering neither fate - namely those which are too much or too little water vitiates. For all the signs rise with various influences mingled in them and with a varied texture. Nothing is homogeneous. Behold the expanse of the earth and the sea, the rivers flowing with their different banks<sup>(1)</sup>. Everywhere crime is frequent and evil is joined to good. For example, unproductive soil occurs in between fertile areas and destroys abruptly, with but a small intermediate area, the land's consistency. What was recently a haven from the sea becomes a seething whirlpool and the charm of the once praised sea is soon forgotten. A stream flows, now through rocks, now through plains, and<sup>(2)</sup> forging its path or looking for one, it either flows forward<sup>(3)</sup> or returns. In the 410 415 420

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(1) 417 Reading uariis. Housman reads partis.

(2) 424 Reading et faciens. Housman reads aut faciens.

(3) 424 Reading curritue. Housman reads uritue.

same way the divisions of the sky within the signs vary. As one 425  
 sign differs from another, in the same way each sign has internal  
 differences and within a brief space reverses its influences and  
 salutary effect and what is carried in the womb in these parts,  
 comes forth from it not destined to grow to manhood or is either  
 born prematurely and dies or experiences joys mingled with many  
 woes. I undertake to indicate these parts in a part of my poem 430  
 suited to expounding them. But who can mention so many numbers  
 so often in their order, repeating so many parts, giving so many  
 totals and in mentioning the same numbers, alter the form of  
 utterance?....<sup>(1)</sup> and work which displeases the ear is wasted. 435  
 But since I am expounding in my poem the laws of fate and the  
 sacred movements of the sky, I must speak as I am bidden. The  
 shape of the heavens is not given to be elaborated, but merely to  
 be indicated. To reveal God is a task beyond my powers: he him-  
 self will win belief in himself. It is not right that the uni- 440  
 verse should be decked out in fine words; it will be more im-  
 pressive as it really is. The thanks due to our speech is not  
 small, even if all it can do is to show what must be avoided.  
 Learn then what degrees of the signs must be condemned.

The fourth part of the Wool Bearer is harmful, nor is the  
 sixth healthful, the seventh is like it, as are the tenth and the 445  
 one following the tenth and the parts whose numbers double the  
 two numbers seven and nine. One part added to the twentieth

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(1) Omitting the corrupt 434 from the translation.

harms, also five added to twenty and seven added to twenty. This ends the barren area of this sign.

The ninth part of the Bull is harmful and the third after the tenth is like it, as also the seventh part joined to the tenth. The parts whose numbers are twice eleven and twice twelve are harmful, as is that whose number doubles thirteen or that which takes two from thirty and the sum of thirty parts. 450

The first part of the Twins is destructive. The third part of that sign is also destructive. The seventh is no better and there is equal harm in the fifteenth. The part one less than the twentieth and the part one more are also harmful. The twenty fifth is equally harmful, as are the parts formed when either two or four is added to it. 455

The first part of the Crab is not free from harmful properties, nor is the third or the sixth. The eighth is the same as these. The first part after the completion of the tenth snatches away, nor is the treatment given by the fifteenth any milder. The seventh part after the tenth and the twentieth part carry grief, as do the fifth added to the twentieth and the seventh and the ninth after the twentieth. 460

The Nemean Lion too is to be feared when first encountered. He presses heavily during the ascendance of his fourth part. The fifth doubled and the fifth trebled both lack a health giving atmosphere. The twenty second part works harm. The last 465

of the three parts following the twenty second is harmful<sup>(1)</sup>, as is the last of the three parts following them, nor is the thirtieth part better than the first.

Of Erigone the first and sixth parts are never beneficial, nor are the first, fourth and eighth parts after the tenth. That next to the twentieth and the fourth from the twentieth are to be feared, as also the final part, which forms the thirtieth and concluding degree.

470

The fifth part of the Claws and the seventh part of that sign<sup>(2)</sup> are useless, as are the third part from the eleventh and the seventh from the tenth, the fourth and the seventh parts after the part which completes twice ten degrees and both the parts which end the total - the ninth part after the part which completes twice ten degrees and the thirtieth part.

475

The Scorpion is guilty in the first part and the third is like the first part. The sixth, tenth and that which is marked by you as the fifteenth, the part double in number to the eleventh and that which is the twenty fifth, the one in the eighth place after the twentieth and that which holds the ninth, are similarly guilty.

480

If fate allows you, do not select the fourth part of the Centaur. Avoid the eighth too. The air is to be feared when twice

(1) in 467 uictum est is corrupt. "harmful" gives the sense of what is lost.

(2) 473 Reading astri. Housman reads aestu.

six, eight or ten parts have been completed and when the Centaur brings forth parts whose number doubles twelve or thirteen or is four times seven or when he forms the thirtieth part.

485

The seventh part of Capricorn is not desirable. The ninth has similar sentiments, likewise the part signifying the third part after the tenth and the parts that deprive the twentieth part of three or one, or those which increase it by five or seven....

The first part succeeding to the tenth when it is completed, the third and the fifth and that placed in the ninth place after the tenth are to be condemned, as are the first part after the twentieth, the twenty fifth and the fourth after it, namely the twenty ninth.

490

The third, fifth and seventh parts of the twin Fishes, the eleventh and the seventh joined to the tenth are to be feared and the fifth, multiplied by five and the part which receives two more numbers in addition to that number, are to be feared.

495

These parts receive a sterile atmosphere either because of their cold or heat or dryness, or because they have too much moisture, if burning Mars casts his fires on them or Saturn his ice,  $\left\langle \text{Phoebe the dew she draws from the earth near her} \right\rangle$  or Phoebus his heat.

500

Continue your careful investigations, now that you have perceived the parts of the signs. Certain parts alter according to the time, that is to say, when rising they receive powers proper to them, but afterwards lose them.

For example, when the Ram lifts himself from the crests 505  
of the waves and comes forth with his neck turned in front of his  
horns, he will beget men discontented with what they have and will  
endow them with lust for plunder, removing all restraint from them.  
Deeds of greed and daring will be their sole delight. The Ram too  
rushes forward, his horns ready, in such a way as either to fall 510  
or conquer. His offspring are not happy with an unchanging home,  
or gentle leisure and peaceful occupations, but it is their delight  
ever to travel through unknown cities, scrutinizing strange seas  
as the guest of all the world. The Wool Bearer himself was wit-  
ness of this for you, when he clove the glassy sea, making it 515  
gleam from the gold in his fleece and carried on his back Phrixus,  
bereft of his sister by her doom, to the banks of Phasis in the  
land of the Colchians.

Those whom the first stars of the rising Bull bring to  
birth will ape the woman in their gait. The cause of this is not  
hard to find - that is, provided it is right to look for causes 520  
for natural phenomena. The Bull comes into heaven with his hind-  
quarters uppermost and with a rich accompaniment of maidens,  
carrying with him the Pleiads in a small cluster. There comes to  
men born under the Bull the wealth of the countryside and he ad-  
orns the man born under himself with his own gifts, from the fields  
turned over by the plough share.

Now when the water lifts out as much of the Twins as it 525  
conceals, it gives zeal for learning and produces apprentices for

the arts. No gloomy nature, but one imbued with sweet grace, is its creation; it endows with the blessings of a voice and a tuneful lyre and joins the gift of song to the intelligence.

When the black Crab rises with his dark cloud, where his fire fails, burnt out, as it were, by Phoebus' fires and allows the sign to grow black in deepest darkness, light fails its offspring, fate gives a twofold death to those born under it. Each celebrates his own funeral while living. 530

Those for whom the greedy Lion brings forth his mouth through the crests of the waves and with gaping jaws climbs the sky, stand accused before their fathers and children. They will not bequeath the wealth they themselves received but will drown it in their own bellies. Such hunger and dire greed for food seizes their appetites that they consume themselves and yet are never satisfied. They spend on feasting the money they should save to bury themselves. 540

When rising, Erigone, who ruled an ancient generation with justice and turned and fled when it began to degenerate, raises men to peaks of eminence in the highest magistracies. She will produce a man to supervise civil and religious law and keep a reverent watch over the temples of the gods. 545

When the Claws that belong to autumn have begun to rise, one blessed in his birth under the equally balanced weights of the Balance will be born. As a lawgiver he will hold the tongue of the Balance of life and death impartially balanced, lay his yoke

upon the earth and bring forward legislation. City states and 550  
kingdoms will tremble before him and be ruled by the nod of this  
one man. After his rule on earth, rule over heaven will await  
him.

When the Scorpion lifts up the luminous bodies in the  
end of his tail, a man born then, if the planets are favourable,  
will add to the cities of the earth. With his toga girt up he  
will mark out a position for the walls with a curved plough pulled  
by yoked oxen, or else he will lay low established cities, reduce 555  
fortified towns to plough land and make ripe ears of corn grow in  
men's dwellings. So great will be his valour and with his valour,  
power.

The Bow Bearer, when he rises with the first part of 560  
his clothing in view, will produce men distinguished for courage  
in war and lead victorious generals in great triumphs to the  
citadels of their mother cities. The same man will now set up,  
now destroy, high walls. But Fortune, although granting him too  
much good fortune, looks with jealous eye upon his face and  
wreaks a most savage havoc upon his brow. With such an appear- 565  
ance before his flight did the victorious general, dire in war,  
pay for Trebia, Cannae and Lake Trasimene.

The last part of Capricorn, the tip of his tail, imposes  
toil at sea, a hard life of service in looking after ships and  
one ever running the danger of death. 570

If you wish one who is pious, chaste and upright, he

will be born for you when Aquarius first comes forth.

Lest your heart should wish the first part of the Fishes also to come forth, know that a hateful proneness to gossip and a poisonous tongue ever speaking slanderous words to new ears and the carrying with forked tongue of charges against one person by means of another, is given there. There is no reliability in those born under the Fish, but a consuming desire bids their burning minds to go through the middle of fires. We all know that it was a fish that Cytherean Venus changed herself into when, by plunging into the waters of Babylon, she escaped snake footed Typhon, with his winged shoulders and implanted her fires in the scaly fishes. There will not be one offspring from the twin Fishes. There will be a brother and a sweet sister, or a mother of two. 575 580

Come now, perceive the signs dominating over different lands. Firstly, however, a picture of the whole earth must be given. The sky is divided into four parts, that of the rising and that of the setting of the day, that of the midday heat and yours, Helice. There are as many winds and they burst forth from these four directions and wage war with one another in the void. Boreas rushes boisterously from the pole, Eurus flees from the rising sun, Auster loves the midday sun and Zephyrus the setting sun. Between these directions two winds from each intermediate part breathe forth gusts similar in kind but different in name. Earth itself floats, girt by the garland of the Ocean, which surrounds with its liquid embrace the earth's circular shape. 585 590 595

Earth receives Ocean into its bays. The latter is admitted from  
 the black west and washes on the right Numidia and burning Libya  
 and the citadels of once mighty Carthage and calls its curving 600  
 coast line into the Syrtes, full of shallows. Then its waves  
 again travel in a straight course - right up to the Nile. Its  
 waters in the left hand side of the straights of Gibraltar strike  
 Spain with its many tribes and Gaul, a land neighbouring to the  
 land of Spain and then strike the cities of Italy, whose curved  
 coastline meets the sea, travelling to the right, until it comes  
 to Scylla's dogs and greedy Charybdis. As soon as Ocean pours  
 through this passage, it travels out into the open Ionian sea and 605  
 wanders about freely among its waters and, as before, it pours  
 itself out to the left. It completes its journey around Italy  
 (its name changed to the Adriatic Sea) and drinks the flow of  
 Eridanus and carries Illyrian skiffs on its level surface. It  
 washes Epirus and famous Corinth and sweeps around the spreading 610  
 shores of the Peloponnese. Again it flows to the left and passes  
 by along the vast recess formed by Thessaly and Achaia. Then the  
 straight of the youth and the drowned girl is forced against its 615  
 will. The Propontis joins its jaws to the open Euxine sea and the  
 waters of Lake Maeotis, which joins the Euxine at its back and  
 provides it with its waters. When the sailor is recalled to the  
 narrow jaws of the Propontis and goes back out through the waves 620  
 of the Hellespont, he cleaves the Icarian and the Aegean and  
 admires the populous land of Asia, which gleams on his left, her

trophies, as numerous as her localities, her innumerable native  
 tribes and Mount Taurus jutting forth into the waves, the peoples  
 of Cilicia and burnt up Syria and the earth receding from the 625  
 waters in a huge gulf until the shore line, curved by the waves,  
 duly reaches Egypt and dies by the banks of the Nile. The line I  
 have described surrounds the Mediterranean Sea with land and  
 bounds the expanse of its waters with sand. There lie countless 630  
 lands in the middle, scattered over the surface of the sea. A  
 footprint marks Sardinia in the Libyan sea. Sicily, the land of  
 three promontories, is only just cut off from Italy. Greece  
 wonders at the mountains of Euboeia opposite. Crete, who received  
 the Thunderer as a citizen, is struck by the waves of the Aegean,  
 and Cyprus by those of the Egyptian river. <As well as these 635  
 large islands> and many smaller ones, which although of smaller  
 area, nevertheless do stand out from the sea, and ones equal to  
 these, the Cyclades, Delos, Rhodes, Aulis, Tenedos, Corsica, whose  
 shores are near the land of Sardinia, Ebusus, conqueror of the 640  
 Ocean as soon as it enters into the circuit of the land, and the  
 Balearic Islands with their fields, innumerable crags and moun-  
 tains rise everywhere out of the deep.

Ocean has not opened up the earth to itself and broken  
 in by only one entrance, for Phorcus has struck many shores with  
 the waters of Ocean, though he is stopped by high mountains from 645  
 overcoming the whole earth with his flood. Between the abode of  
 the North wind and the place which gleams from the rising summer

sun, the sea waves enter in the shape of a long and narrow gulf  
and then at last pour over spreading fields and make the Caspian  
Sea similar to the Black Sea. Towards the south, the Ocean makes  
war upon the earth at two other places in the same way. For waves 650  
occupy Persian fields, taking the title for their sea from the  
very places they water. They form a circular expanse. Not far  
away, the sea gently washes with its bejewelled shores the land of  
the effeminate Arabs, a land bearing delights and new perfumes 655  
from various roots. The sea has the name of the land. The land  
lies between two seas... Formerly Carthage obtained dominion by  
her arms, when Hannibal ground down the Alpine heights with fire,  
made Trebia eternal in fame and overwhelmed Cannae with funeral 660  
pyres and poured the tribes of Libya into the cities of Italy.  
Nature, hostile to future invading armies, has heaped up in Libya  
various destructive and monstrous beasts. The land has terrible  
snakes - something for which it is greatly blamed - with bodies a 665  
dwelling place for venom and which live on food that kills others.  
It also has huge elephants and, fertile in children to punish it-  
self, also bears savage Lions and sports to such an extent as to  
produce monstrous apes. Worse off than if it were sterile, it  
makes its dry sands hostile to men, until it ends its sway at the 670  
farms of Egypt. Then comes the populous land of Asia, rich in  
everything: rivers flow with gold and the sea gleams with precious  
stones; scented woods breathe forth their healing balms. There  
comes India, too great ever to be known, Parthia, almost another

world, the battlements of Mount Taurus rising to the heavens, the 675  
numerous races with different names near it. Nearby lie the River  
Tanais, which divides two continents with its Scythian waters,  
Lake Maeotis and the truculent Euxine Sea. [its level expanse  
and the Hellespont at the end of the Propontis.] Nature has set  
this river as the boundary of powerful Asia. The remaining lands 680  
are held by Europe. She first received Juppiter when he was swim-  
ming on the waves in the form of a bull and freed him of his bur-  
den. She allowed him to set down his flame - herself - and join  
himself to his load. He called the land which he reached from the  
sea after the girl's name and by this title consecrated it as a  
monument of his passion. It is a land very great in men and very 685  
rich in acquired skills: Athens, distinguished in the realm of  
oratory; Sparta, in manual activities; Thebes, in its gods;  
Pella, ruler of the world because of one king of her house, this  
being the reward of her help in the Trojan war; the powerful 690  
lands of Thessaly, Epirus and Illyria, near them both<sup>(1)</sup>; Thrace,  
which received Mars as a settler; Germany, amazed in the midst of  
her own offspring; Gaul, greatest in wealth; Spain, in war and  
finally Italy, which Rome, greatest of all, has made ruler of the  
world, joining herself to the heavens. 695

These are to be considered as the boundaries of the  
earth and sea. God divided the globe into parts and allotted the  
parts among all the signs, giving its own domain on the earth to  
each tutelary sign, giving each its own races and lofty cities in

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(1) 690 Reading utrisque. Housman reads ripis.

which to mingle its most salient influences. Just as the human 700  
 shape is divided among the signs and although these signs share a  
 common guardianship over a particular part which has been assigned  
 to them in the division of the body (the Ram clings to the head,  
 the Bull to the neck, the arms are reckoned under the Twins, the  
 Breast under the Crab; the shoulders call the Lion their pro- 705  
 tector and the groin the Maiden; the Balance rules over the  
 buttocks and the Scorpion over the sexual organs; the Bow Bearer  
 loves the thighs and Capricorn the knees; the Young Man defends  
 the legs and the Fishes the feet), in the same way different signs 710  
 claim different lands for themselves.

It is for this reason that humanity is divided into  
 races with different ways of life and physical attributes. Each  
 race is formed with its own proper colour and men of one race  
 show their affinity in their bodies and that they are of the same  
 stock by their likeness to each other, not shared by other races.

Germany has tall, blond, golden haired offspring. Those 715  
 of Gaul are dyed with a similar redness, though less pronounced.  
 Those of Spain are rather rough, their limbs solid and compact.  
 Mars Gradius, the Father of the city, has endowed the Romans  
 with a martial countenance and Venus, mingling herself with him,  
 makes their bodies well proportioned. Well woven Greece shows 720  
 forth through the tanned appearance of her offspring her devotion  
 to the gymnasium and the manly wrestling ground. Hair twisted at  
 the temples betrays a Syrian origin. The Ethiopians stain the

world dark and take the shape of a race of men dyed with darkness. India begets men who are of a less burned colour. The land of Egypt, which swims on the Nile and has irrigated fields, makes men's bodies only mildly tawny. It is nearer to the Romans and 725 moderated and makes the colour of its inhabitants midway between the colour of the Romans and that of the Ethiopians<sup>(1)</sup>. Phoebus makes the peoples of Africa, with their sandy soil, dry from dust. Mauritania derives its name from its appearance and owes its title 730 to its colour. There are as many languages as peoples and as many tongues and customs and habits suitable to the particular place each people has been given: moreover, each place has its own type of crop although the same seed is planted. Ceres returns a different harvest in different places, nor does she make every 735 kind of bean have the same yield. Bacchus does not give every land the same amount of wine, but causes different grapes to grow on different hills. Cinnamon does not grow on all plains. Domestic animals look different in different places and different places have wild animals which are peculiar to them. For example, elephants are enclosed in two prisons on the earth. What appear 740 to be parts of the world are, in reality, separate worlds, seeing that each sign is allotted its own regions to shine on and beams

(1) 725-7 Reading progenerat; tellusque natans Aegyptia Nilo/lenius inriguis infuscat corpora campis/iam propior mediumque facit moderata tenorem. Housman reads progenerat mediumque facit moderata tenorem;/iam propior tellusque natans Aegyptia Nilo/lenius inriguis infuscat corpora campis.

its ether on the races subject to it.

The Wool Bearer has his own stars at the middle of the world { where the sun balances on an equal scale night and day } in spring between the Crab and the cold Goat. He claims as his own 745  
the stretch of water which he conquered himself, when, although the Maiden fell off him, he carried her brother to the shore, weeping when his load was lightened and his back relieved. The neighbouring Propontis as well worships him with reverence, likewise the races of Syria, the Persians, encumbered by the length of their flowing garments, the Nile, which rises in protest against 750  
the Crab's heat and the land of Egypt, bidden to float. The Bull holds the mountains of Scythia, powerful Asia and the effeminate Arabs, kingdoms rich in forests. The Euxine sea, curved in the shape of a Scythian bow, reveres Phoebus, in the persons of the 755  
Twins. Thrace and, on the edge of the world, the Ganges, which swims across the soil of India, revere the Brothers. The Ethiopians burn under the Crab, whose fire is greatest. This their very colour shows. The Nemean Lion, servant of the Idean mother, possesses Phrygia, the kingdom of the spirited Cappadocians and the 760  
ridges of Armenia. Rich Bithynia and the land of the Macedonians, which once conquered the world, reveres him. Under the chaste Maiden Rhodes prospers by land and sea, Rhodes, the host of a leader destined to rule the world, then truly the home of the sun, to whom it is entirely dedicated, when it received the light of 765  
the great world in the person of Caesar. The cities of Ionia and

the Dorian countryside are also under her, the Arcadians with  
 their long history and Caria, celebrated in story. What other  
 sign would be more likely to look after Italy, if it had the  
 choice, than that which rules everything, which knows the weights 770  
 of things, indicates totals and separates the fair from the un-  
 fair? From it the time depends and at it night and day come to-  
 gether in length. Her own Balance holds the western land. Under  
 the Balance there was established Rome, the ruler of the world,  
 who controls the world's vital interests and exalts and humbles  
 the races placed on the scale pans of the Balance. Under the Bal- 775  
 ance was born Caesar, who has given the city a better constitution  
 and rules a world dependent on his very nod. The sign beneath it,  
 the Scorpion, chooses the citadels of conquered Carthage, Libya,  
 the flank of Egypt and the countryside of Cyrene, which has been 780  
 given the gift of the distillation of a pungent root. He looks  
 however towards the waves of Italy and holds Sardinia and the lands  
 scattered over the sea. The Gnosian land, surrounded by the sea,  
 obeys the Centaur, and the son of Minos, himself of twofold nature,  
 is under the protection of a twofold sign. Because of this, Crete 785  
 claims her swift arrows, in imitation of the drawn boy of the  
 sign. The Island of Sicily, with three promontories, follows her  
 sister Crete, who floats under the Archer's domination. She is  
 placed under the same sign. The neighbouring part of Italy,  
 divided from Sicily by a short expanse of deep water, follows the  
 same laws, and is no different to it in sign. Capricorn rules 790

whatever lies under the setting sun and the region extending from there until it touches chill Helice - the races of Spain and whatever rich Gaul brings forth. The sign, half terrestrial, half marine, claims as its own Germany, a mother worthy of only wild creatures, and now sea, now land, because of the never ending tides sweeping over it. He holds as his due the citadels of Tyre near warm Egypt, the Cilician races and the fields near the Carians. The Euphrates is given to the Fishes, for it was here that Venus, with their aid, went underwater, when she was fleeing from Typhon. The Tigris too is given to the Fishes, and likewise the gleaming shores of the Red Sea. Under the Fishes there lies a mighty land, surrounded by mighty banks, Parthia and the races conquered through the ages by the Parthians, Bactra and the Ethiopians, Babylon, Susa, Ninos and names that can scarcely be included in prose figures of speech.

In this way the earth is divided among all the signs. The relationships existing between the signs must also be reckoned as existing between their regions. For these regions keep the same relationships between themselves as exist between their signs and according as the signs form friendly relationships with each other or are opposed to each other, whether because they are opposite each other in the sky or joined in a triangle, or whatever other factor governs them in their various relationships, lands will be friendly to lands, continents to continents, shores opposed to shores, kingdoms to kingdoms. Certain places must be avoided or sought by each man, help desired

or dangers feared according to the sign of high heaven that his race comes from.

Learn now as well the signs the Greeks call the ecliptic signs, because in certain years, as if wearied, they sometimes become barren, their influences having no creative effect on things. It is plain that nothing stays the same over a vast period of time, keeps in its prime for ever or keeps the settled tenor of its existence, but everything changes because of time and varies through the years. Fertile fields cease giving their crops, refusing to produce one crop after another, being worn out with creation. On the other hand, lands which were sterile when they received seed, afterwards give an unaccustomed yield, although no one has sown them. The earth, though the pivots holding it together are strong, is shaken and withdraws its soil from men's feet. The region formerly dry land is afloat. The Ocean pours forth the sea and greedily swallows it back, but cannot contain itself. Once upon a time the sea overwhelmed cities in this manner, when Deucalion was the only heir of the human race and possessed the whole world on one rock. When Phaethon tried to direct his father's reins, nations burned, the sky feared a conflagration, the fiery stars fled the flames they were not accustomed to and nature feared that all would be buried in one tomb. To such an extent are all things changed after a long time, subsequently returning once more to their original state. In the same way, at definite times, signs too lose their power and then

recover it. The cause is plain. Those signs in which the moon 840  
 is eclipsed, deprived of her brother and plunged into the dark-  
 ness of night, when the earth in the middle intercepts Phoebus'  
 rays and Delia does not receive the light by which she is accus-  
 tomed to shine, - these signs also languish together with her 845  
 light, at the same time weighed down and deprived of their accus-  
 tomed vigour and, as it were, mourn Phoebe who has been carried  
 out in a funeral procession. Their name tells us the cause. The  
 ancients called them ecliptic signs. Two signs at once are 850  
 troubled, not adjacent signs, but ones gleaming opposite each  
 other, just as the moon's orb fails only when she does not see  
 Phoebus as he travels in the opposite sign. Not all signs lan-  
 guish for the same time. Sometimes they are influenced for a  
 whole year, sometimes they are weary for a shorter period than 855  
 this, sometimes for a longer, the duration of their weakness ex-  
 ceeding the period of Phoebus' journey. When the time allotted  
 to each is completed, the two signs gleaming opposite each other  
 across the whole diameter of heaven end their trials in a partic-  
 ular configuration. Then those neighbouring signs which set be-  
 neath the earth or rise from the earth before them, slip and de-  
 cline. This loss of powers does not travel to the next sign in a 860  
 direction contrary to the movement of the sphere of the stars,  
 but travels in the same direction as the celestial sphere directs  
 its course. The signs deny men powers they themselves have lost  
 and give them neither as much good<sup>^</sup> or as much evil as before.

This place alters all the signs.

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But what use is it to examine the gleaming universe with such subtle reasoning if each man's mind fights against him and fear takes away confidence and bars him from the threshold of heaven? A man might say: "Nature is hidden in an immense recess and avoids the eyes and understanding of men and the fact that fate rules all is of no use to us when fate cannot by any means be observed". What use is it to harm oneself by such abuse of oneself and cheat oneself of benefits which not even God himself begrudges us and not to use the eyes of the mind which nature has given? We can see the heavens, why not the gifts of the heavens as well? ... and completely probe the wealth of the universe and determine how such a great mass grew from its elements and, being an offspring of heaven, be carried through what first nurtured one, going to the very ends of the sea, penetrating the suspended regions of the earth, living throughout the world and learning how to calculate what part of the night remains. Now nature is hidden in none of her parts; we have seen all of it and have possession of the universe we have captured, and, a part of her, we perceive our mother and approach the stars under which we were born. Can there be any doubt that God dwells in our hearts and that our souls have come from heaven and return to it and that just as the whole universe, composed of matter of all types, air, empyrean fire, earth and sea, is the abode of a mind infused throughout it and governing it all, in the same way, we have bodies of the substance of the earth and our soul, which governs and regulates

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the whole man, has a mind consisting of blood? Is it any wonder  
 that men can understand the universe when the universe is in them  
 and each man is an image of God writ small? From what, other 895  
 than the heavens, is it right to believe that men have derived  
 their being? All animals lie prone near the earth, or sunk in  
 the sea or fly in the air, their sole delight being in sleep, food  
 < and sex; their powers > being in their body only, because they 900  
 have no intelligence and cannot speak. Only that offspring which  
 rules all is brought up to look into things, talk, have a keen  
 intelligence and various skills. He alone has withdrawn into  
 cities, tamed the earth so that it will produce crops, captured  
 animals, made the sea his road; he alone stands erect, with his 905  
 head a citadel and, victorious, sends his sidereal gaze to the  
 stars, looking at Olympus from close up and seeking Juppiter. He  
 does not remain content with knowing merely the outward appear-  
 ance of the gods, but he examines the heaven's' inmost parts and in 910  
 pursuit of a body like his own, seeks himself in the stars. From  
 the heavens we seek credence for such great claims, credence that  
 birds and fibres pulsating in hearts are often given. Is it a  
 lesser thing to derive this science from the sacred signs than be  
 concerned with the corpses of animals and the songs of birds?  
 God himself does not begrudge showing the face of the sky to the 915  
 world, but shows his body and <sup>u</sup>contenance, even causing himself to  
 rotate, impresses himself upon us and offers himself to us, so  
 that he may be well known and teach us, as we behold him, what he

is and compel us to heed his laws. The heavens themselves call  
our minds to the stars and do not suffer their laws to be hidden, 920  
for they do not hide them. Who thinks it wrong to know what it is  
right to see? Do not despise your strength, saying that it lies  
in a puny body. In power it is very great. In the same way, a  
small quantity of gold is more valuable than plentiful heaps of 925  
bronze; in the same way adamant, though only a tip of stone, is  
more valuable than gold; in the same way the tiny pupil sees the  
entire heavens. The aperture through which the eye sees is very  
small, but it can see very large objects. In the same way the  
seat of the mind is placed in our small breast and rules the entire  
body from a very confined area. Do not worry about the size of an 930  
object, consider only the power which its mind, not its magnitude,  
has. Reason overcomes all. Do not hesitate to believe that man  
has divine vision; he himself makes gods and sends them to heaven.  
The sky will grow greater now that it has Augustus as its ruler. 935

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BOOK 5.

Here another man would have ended his journey and, having told of the signs and the five planetary powers, Phoebus with his four horse team and Delia with her two, which move in an opposite direction to the signs, he would not have constructed his work any further, but would have returned from the heavens<sup>(1)</sup> [and in his descent be telling of the intermediate fires, Saturn, Juppiter, Mars, the sun, then under them Venus, Mercury the son of Maia and wandering Delia<sup>(2)</sup>.] I, however<sup>(3)</sup>, am bidden by the heavens to travel in a swift course around all the constellations and travel through every part of the sky, having once dared to ascend an etherial chariot and having touched the topmost point of the heavens, rising to it by its proper approaches. From one direction Orion, the largest constellation of the great heavens, summons me, as does the ship of the heroes, which in its position among the constellations is still sailing, the Rivers which arch their far roaming coils, Cetus, that combination of two wild animals, with his scales and terrible mouth, the watchful guardian of the daughters of Hesperus and the precious gold, the Dog carrying fiery ruin for the whole earth and the Altar of the gods, upon which the deities of Olympus paid their vows. From another direction the Snake which glides between the two Bears calls me, as

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(1) 4. Reading redisset. Housman reads rediret.

(2) Deleting lines 5 - 7. Housman retains them.

(3) 8. Reading tamen. Housman reads etiam.

do Heniochus, keeping his mind on his chariot and Bootes, keeping  
 his mind on his cart, the Garland, the gift given to Ariadne and 20  
 now in heaven, Perseus, conqueror of the hated Medusa, with his  
 scimitar, Cepheus and his wife, in the act of killing Andromeda.  
 On another side there fly the Horse adorned with stars, the Dol-  
 phin vying with the arrow in swiftness, Juppiter, hidden beneath 25  
 the shape of a bird and the rest of the constellations, gliding  
 everywhere throughout the heavens. I must sing of all these,  
 giving the proper effects of each, both when they rise and when  
 they sink into the waves and how many degrees of one of the twelve  
 signs brings each back. [The maker of the great heavens made the 30  
 proper effects and times of things dependent on the planets.]

The leader of the flock and conqueror of the sea, to  
 which he gave the name of his burden and in which he left a part  
 of himself, who was not ungenerous where his fleece was concerned  
 and was the cause of Colchian Medea's arrival in Iolcos with her  
 magic arts and of her journey throughout the world with her poi- 35  
 sons, now still leads the neighbouring Argo by the stern, from  
 the right hand side, as if he were sailing through the stars.  
 The stern begins to show its fires when the Horn Bearer has shown  
 his face in the first four of his parts. Whoever is born on the  
 earth when it is rising will be the helmsman of a ship. He will 40  
 hold onto the helm without moving, travelling on the sea from land  
 to land, seeking his fortune with the help of the winds, wishing  
 to sail over the entire expanse of the deep sea with a fleet, see

other kinds of monthly weather, see deep Phasis and outstrip 45  
 Tiphys in his wild career onto the rocks<sup>(1)</sup>. Take away the birth  
 of men placed under such a constellation and you will have taken  
 away the Trojan war, the fleet which was both released from its  
 moorings and brought to land by blood. No Xerxes will carry the  
 land of Persia on the sea, create or cover a sea; there will be  
 no reversal of Salamis at Syracuse ruining Athens, no Punic prows 50  
 floating all over the sea. The world will not hang suspended  
 between the two headlands of the bay of Actium or the fortune of  
 the sky float on the sea. Under the guidance of men born under  
 this constellation, fleets are launched onto the unknown sea, diff- 55  
 erent parts of the earth are brought together and the whole world  
 is summoned by the winds to supply different commodities to other  
 parts.

Rising with the tenth part of the Ram and on its left  
 side comes mighty Orion, greatest of the constellations, embracing  
 the sky where it is of great extent. When he shines over the  
 earth and draws the heavens with him, night, imitating day, con-  
 tracts its black wings. Orion creates men with sharp wits and 60  
 agile bodies, minds quick at their work, hastening with unwearied  
 vigour through all their tasks. His offspring will be like the  
 common people and will dwell in all parts of the city, flitting  
 from door to door; a friend of all, bearing everywhere the same 65

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(1) 45 Reading ruentem. Housman reads trementem.

word of morning greeting.

When the Ram has risen from the earth through fifteen of his degrees, the Charioteer first lifts his yoke from the waves and pulls his wheels up from the bottom of the slope, where chill Boreas presses upon men with his cutting northern blasts. He bestows interests proper to himself and the skills which he formerly 70 enjoyed when a driver on earth, skills still retained in heaven: standing on a light chariot, guiding and turning his four very strong horses, whose mouths are bridled with foam flecked bits, directing them round in a circular path and, when the pivot has 75 been released and they have sped away from their barriers, driving on these fierce ones and, leaning forward, outstripping them in their speedy movement, scarcely touching the surface of the track with the light wheels, outstripping the winds in the swiftness of his horses' hooves, or, holding the front position, driving them sideways and going slow, obstructing all the other runners with his delaying tactics or, in the middle of the crowd, 80 now wheeling to the right, trusting in the level ground, now racing round near the sharp pointed turning post and staking his uncertain hopes on a last minute dash. Another will be a jumper and will be able to sit on the back of one horse after another 85 and place his well balanced feet upon them; he will go from horse to horse; he will play on their backs as they gallop, or, carried on a single horse, he will now handle weapons, now pick up at a gallop prizes placed the length of the track. He will have whatever is derived from such interests. In my view Salmoneus could 90

be held to have been born under this constellation. Imitating the sky on earth and thinking that he was giving the sound of the sky and bringing Juppiter himself to earth, when he set up a bridge of brass and sent a four horse team across it, he felt the force of thunderbolts as he was fashioning them and, following the fires he himself had let loose, he learned who was really Juppiter 95 by dying. One could believe that it was because he was born under this constellation that Bellerophon made a path in the sky as he flew through the signs, with the heavens his race track, the earth and the sea beneath his feet, his journey leaving no hoof prints. 100 It is for these reasons that the form of the Charioteer should be noted by you when it is rising.

When the Ram has doubled ten parts in his rising, the Kids begin to show their flickering chins and then finally offer their shaggy backs to the earth where Boreas blows from the right. Do not attribute the making of a sober brow to this sign<sup>(1)</sup> or 105 believe that tight lipped Catos, harsh Torquatus or the deeds of a Horatius are begotten under it. Such personages would be too weighty for this constellation. Such mighty deeds as theirs do not fit the wanton character of the Kids. They rejoice in frivolity and put the stamp of lasciviousness on the minds of their offspring. Their offspring sweat in agile games and deeds of agile vigour and spend their youth in promiscuous enjoyment of sex. It is never valour, but often lust, that drives them into receiving wounds and foul pleasure is bought even at the price of death. To die is a very small evil for them, for it is through criminal

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(1) 106 Reading signo. Housman reads signi.

behaviour that they conquer. The Kids also grant to those born 115  
 under them the care of flocks, making them look after kids like  
 themselves and making them men from whose neck there hangs a set  
 of pipes, men who draw sounds from one pipe after another.

When the seventh degree of the Wool Bearer has acquired  
 twenty more degrees, the Hyades rise. Peace in no way pleases  
 those born at this time, tranquillity is considered by them to be 120  
 of no value; they desire popular disturbances and general sed-  
 ition. Dissent and uproar delight them. They like men such as  
 the Gracchi holding the speakers' platform and incidents such as  
 that which involved the Sacred Mount and the depletion of the  
 citizen body. They approve of war in peace time and worry their  
 betters. They drive unclean droves through the squalid country- 125  
 side. They begot the faithful swineherd of Laertes' son. This is  
 the character the Hyades impart when their stars are rising.

When the last part of the Wool Bearer is shut off by the  
 zodiac<sup>(1)</sup>, shows the whole sign to the earth and brings it forth  
 from the waves, Olenie rises, protecting the Kids that go before 130  
 her. She was made a constellation in the icy part of the right  
 hand hemisphere. She is mother through her services to great  
 Juppiter. She gave the Thunderer sure nurture and, his mouth  
 agape, filled his breast with her milk, giving him strength worthy  
 of one who wielded thunderbolts. Under her, trembling spirits  
 and fearstricken hearts are born, ones on edge at every sound 135

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(1) 128 Reading orbi. Housman reads orbis.

and cringing for the slightest reason. There is also ingrained in them a desire ever to seek the unknown, just as she-goats ever seek fresh mountain pastures and delight in travelling further as they graze.

The Bull, when he rises with his hind quarters uppermost and his head downwards, with his sixth part leads forth the Pleiades, sisters vying with each other in brightness. While they breathe their favour over the earth, followers of Venus and Bacchus are brought forth into the nurturing light, arrogant persons, seeking to excite laughter at banquet tables with savage wit. 140  
 They are ever concerned with their attire and the adornment of their face, twisting their hair and setting it in waves, piling it into a dense crest kept in place with ribbons or changing the appearance of their heads with a wig, taking the hair from their bristling limbs with a porous pumice stone, hating their masculinity and desiring smooth round upper arms. Their clothing is that of women and they wear shoes on their feet, not for use, but for show. They take delight in affecting mincing steps. They are ashamed of their sex and vaingloriousness lurks in their blind hearts. They boast of their sickness, calling it virtue. It is 150  
 not enough to be always the lover. They want to be seen to be such. 155

When the Twins bring forth their stars, joined in brotherhood, into the sky and swim on the crest of the waves of the sea, their seventh part lifts up the Hare with it. Nature all but grants wings and the flight of a bird to those born under 160

this constellation, so great is the swiftness that will be in their limbs, a swiftness that will remind one of the winds. One will be the victor in a track race even before he leaves the starting box. Another will be capable of dodging hard boxing gloves with a swift movement, now nimbly avoiding a palm extended to strike him, now extending his own and heaping upon his opponent swift blows with his quick moving arms<sup>(1)</sup>. Another will be skilled at returning with his fleet foot a ball that is escaping his hand, compensating for his hands with his feet and playing on the ball of his foot. Another is skilled at immersing himself in a cloud of balls, making all the parts of his body into hands, so that he can support so many balls and amuse himself, making them fly about him as if taught to do so. A man born under the Hare lies awake because of his cares, enthusiasm for work overcoming sleep; he spends his leisure pleasantly in various games.

Now I will sing of the neighbours of the Crab. On its left rises Iugulae. Those born when they are breathing their influence over the earth admire you, Meleager, you who were burnt up by far away flames and gave back by your death the gift of life to your mother. Your life faded away little by little before your death. They admire the man who endured the toils that Atalanta loaded him with; they admire that maiden herself, who fought among the rocks of Calydon, proved superior to men and struck down at the first blow a beast which was too terrible for

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(1) Transposing 167 to precede 165.

an ordinary maid to bear to look upon. Wherever Actaeon roamed, marvelled at by the woods even before he became a novel kind of prey to his dogs, there too they themselves are lead. They enclose flat areas with nets, mountains with a fear inspiring feathered line. They prepare pits to deceive and traps to hold and ensnare the fleeing beasts in the tangles of foot traps or they kill them either with their dogs or with their weapons and bring them back as booty. Some concern themselves with catching creatures of various shapes in the sea and with laying out on the sand of the sea shore the bodies of monsters hidden before in the invisible depths, in provoking to war the sea, terrible from its seething eddies, following an elusive quarry without the help of footprints and filtering meandering streams by throwing nets across them, because the earth has too little food for the luxurious livers and their bellies grow tired of terrestrial food and Nereus himself feeds his gullet from the sea.

Procyon arises when the twenty seventh part of the Crab<sup>(1)</sup> has risen from the waves to the stars. He does not make those born under him hunters, but gives them the art of making hunting implements. His gift it is that they can nurture keen scented dogs, calculate their inborn talent from their ancestors and their acquired characteristics from the land of their birth, form nets and hunting spears with strong heads attached and pliant spear shafts with the protuberances planed away. It is his gift

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(1) 197 Reading Cancri. Housman reads Cancro.

to them that they can make and sell for their own profit whatever men's interest in hunting usually demands.

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When the Lion of Nemea rises, with his huge yawning jaws, the swift<sup>(1)</sup> dog rises and belches flames from his barking mouth, raging<sup>(2)</sup> on account of his fire and doubling the force of the sun's heat. When he sends his burning brand to earth and moves his rays, the earth takes on a mantle<sup>(3)</sup> of ash and fears that its last hour is at hand; Neptune languishes in his own waters; the green sap departs from the trees and vegetation. All living things seek other climes and the world itself feels the need of another world. Nature is sick from a self caused disease, overcome by an abundance of heat and lives on a funeral pyre, so fervent are the dazzling rays that are poured out through the stars; all things take on an ashen hue<sup>(4)</sup> due to one source of light. When the Dog has lifted himself from the sea, past the horizon on the right<sup>(5)</sup> - not even the waves of the sea quench his fires as he rises - he makes men unbridled and violent, subject to gusts of rage and hated and feared by the whole of the people. When speaking they outstrip their words; their tongue

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- (1) 207 Reading pernix. Housman reads que canis.
- (2) 208 Reading rabit. Housman reads rapit.
- (3) 210 Reading induitur. Housman reads dimicat in.
- (4) 217 Reading canescunt lumine. Housman reads ceu sunt in flumine.
- (5) 218 Reading dextras. Housman reads primas.

cannot keep up with their thoughts; their temper flares at the slightest excuse, their tongue raves and they bark as they speak; so often do they gnash their teeth that they leave their teeth in their voice. This vice flares up with wine; Bacchus gives it strength and fans angry fury into flame. The irascible fear neither wood nor crag, savage lions, the foam flecked tusks of wild boars nor any wild beast with natural armour. They work off their fiery rage on creatures they are permitted to slay. Do not wonder that such skills are under the control of such a constellation. You see how the constellation itself goes hunting among the stars; it strives to run after and catch the Hare that goes before it.

When the last part of the great Lion has risen and been lifted above the horizon, the Mixing Bowl rises, its stars forming the engraving upon it. Those who derive their character and kind from it will seek out well watered plains in the countryside, streams and lakes and join Bacchus' vine in marriage to its tree, the elm, or set it out on trellises where it may imitate groups of dancers holding hands with its tendrils, or stretch it out into arms, supported by its own strength, trusting it to itself, and, seeing that Bacchus was cut out of his mother, ever sunder it from marriage and sow corn between its grapes. According to their locality, men born under the Mixing Bowl also engage in all the other innumerable forms of cultivation of the vine. When they receive wine they drink it greedily; they enjoy the fruits of their toil, rejoicing in unmixed wine and drown their minds in

their cups. It is not only to the earth that they entrust their hopes, in return for what they promise the gods each year, they also collect corn taxes and seek profit from selling goods, especially such as <sup>are</sup> ~~is~~ nurtured by water ever flowing over ~~it~~ <sup>them</sup>. Such are the men the Mixing Bowl, a lover of moisture, will fashion. 250

Next Erigone appears. When she has come out to meet you, five of her parts having risen from the sea, there will be lifted from the waves the bright memorial of the garland that Ariadne once wore. It will bestow gentle pursuits. For in one part of heaven shine the gifts given to a maid, at another an actual Maid arises. A man born under the Garland cultivates a 255  
 garden gleaming with jewel like flowers, and dark blue olives and green grass growing on a hill side, yellow violets and blood red hyacinths, lillies and poppies emulating the sheen of Tyrian purple and vernal roses, of a blood red colour. He paints the meadows with natural shapes. Or else he entwines together various 261  
 flowers and arranges them in garlands like that which forms his own sign and he burns intertwined  $\langle$  reeds  $\rangle$  and softens Arabian with Syrian essences, making perfumes breathing forth an odour midway 265  
 between the two, so that the allurements might be greater from the mixture of these ingredients. Men born under this sign delight in fopishness, setting off their person, the arts of adornment, debaucheries and the pleasures of the moment. The age of the Maiden and the flowers of the Garland require it.

When downy Spica rises with the tenth part of the 270

Maiden, carrying before her sheathes of wheat to protect her body, she begets in men an interest in fields and agriculture, making them entrust seeds to the furrowed earth as an investment and duly receive in innumerable grains interest greater than their principal. (This is the only metal men should have discovered; if they had there would now be no hunger, no famine on the earth. There was ample wealth on the earth and men had enough to eat 275  
 < when gold and silver lay hidden > on the earth). If toil saps the strength of those born under Spica, she makes them skilled in the art without which there would be no bread and no way of making use of grain - putting grain beneath a mill stone of crushing weight, revolving above it the orb of the mill stone, drowning the spelt in water, baking it on the hearth, making food for men and 280  
 making the one product in many different forms. Since an ear of wheat houses grains disposed in a quasi-artificial way and the disposition resembles one humanly designed and it provides store rooms and silos for its grains, under Spica are born the sculptors of the coffered ceilings of sacred temples, men who make a new sky of the ceiling of the Thunderer's temple. This shape of roof was formerly granted only to the gods. Now it is a part of 285  
 luxurious living. Now dining rooms vie with temples and, roofed by gold, we dine from gold. 290

Behold the Arrow, rising with the eighth part of the Claws. His gift to his offspring is to throw javelins with their arms, shoot arrows from a taut string or toss clods of earth

from sticks to bring down a bird flying through its own element, 295  
the air, or to transfix an unsuspecting fish with a trident.  
What constellation or what geniture would be better attributed to  
Teucer? Under what part would it be preferable to believe that  
Philoctetes was born? The former, with his bow, routed Hector, 300  
who was attempting with blazing brands to spread cruel fires  
through a thousand ships. The latter held the fate of Troy and  
the outcome of the war in his quiver and lived in exile, a foe  
more to be dreaded than those bearing shields. Moreover, it is  
possible that under such a sign was born the father who, when,  
unhappily for him, a serpent was lying upon his son's face and 305  
drinking away his life as he slept, had the courage to aim at it  
and lay it low by shooting an arrow. His skill came from his  
being a father: natural feelings triumphed over the danger. He  
freed the young man from sleep and death at the same time, causing  
him to be born anew and rescuing him from death while he slept. 310

Since the Kid, heedless of the future, like one wander-  
ing in a cleft in the mountains far away from his fellows,  
searches for the footprints of his brothers and comes forth after  
the herd and a long way behind, he makes men quick witted and full  
of ideas in various fields of occupation, capable of bearing a 315  
load of worry, unsatisfied with a fixed abode. They are the ser-  
vants of the people and are borne through the administrative and  
civil offices. When the offspring of this sign is present, no  
auction lacks upraised hands, no goods a buyer, no evil doer makes

profit out of punishment, no debtor cheats his native city of its money. He is the city's advocate. He gratifies his lust in various affairs and lays aside his duties in the forum when he wants to have a drink. He is quick moving in the dance and more effeminate than the artists of the stage. 320

When the Lyre rises, there swims out of the waters the form of a tortoise shell, which acquired a voice only after the death of the tortoise and through the agency of the tortoise's heir. With it, in times of old, Orpheus, son of Oeagrus, drawing sound from it<sup>(1)</sup>, made rocks feel, woods hear, Pluto weep and death end. From this constellation will come the gift of a good voice and of sounding strings, wind instruments of different kinds, twittering tunefully, and whatever speaks when plucked or blown. A man born under this sign will sing sweetly at banquets, making the wine more mellow and holding back the night with his music. In the midst of cares he will sing silently, humming with closed lips and ever when alone he will sing for his own ears, when the Lyre, which lifts its horns to the stars when the twenty sixth part of the Claw rises, so bids. 330 335

What of the Altar, which rises on the same colure as the eighth part of the Scorpion, the Altar which carries burning incense, represented by its stars? It was on this altar that the giants who fell in battle were vowed to destruction. Juppiter did not arm his right hand with the violent thunderbolt until he 340

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(1) 326 Reading sonitum referens. Housman reads somnumque feris.

stood before the gods as a priest. What would these constellations  
 make those born under them if not guardians of temples or temple  
 slaves, ministers of the third rank or men who make propitious 345  
 the sacred powers of the gods with their voices, all but gods  
 themselves, men who can foretell the future?

When four more parts are added to the Scorpion, the  
 Centaur brings forth his stars and fashions the character of the  
 offspring born under him after his own character. His offspring  
 will either drive asses with goads and yoke together quadrupeds 350  
 of hybrid seed, or ride aloft on a chariot, or, riding the horses  
 himself, weigh them down with the weight of his armour, or drive  
 them into battle. Another offspring knows remedies for healing  
 the bodies of animals and how to cure diseases of which there is  
 no audible sign. This is work needing skill - not to wait for  
 groans, but realize that a disease has long existed in animals 355  
 which are not sick in their own eyes<sup>(1)</sup>.

The Bow Bearer follows the Scorpion. His fifth part re-  
 veals Arcturus gleaming from his bath in the sea. To those born  
 at this time, Fortune herself is willing to entrust her riches,  
 making them guardians of the wealth of kings and temple treasur- 360  
 ies, rulers under their king and stewards of his possessions.  
 They become civil servants of republics, or, set in charge of  
 private households, confine their work within another's threshold.

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(1) 356 Reading aegris...morbos. Housman reads aegrum...  
corpus.

When the Bow Bearer has lifted himself entirely from  
the waves, at the thirtieth part, where his stars form an animal<sup>(1)</sup>, 365  
the downy Swan flies into the sky on glistening wings. A man who  
first drinks in the light and leaves his mother's womb when the  
Swan is rising will take an interest in and obtain wealth from  
even the peoples of the air and the winged race, citizens of the  
sky. Countless arts will flow from this interest: declaring war 370  
on the sky, seizing birds in mid flight, depriving them of their  
young, throwing nets over them and drawing them tight as they sit  
on a branch or feed. All this for luxury's sake. Men go further  
now for the belly's sake than they used to only a little while ago  
for war. We feed from the shores of Numidia and the groves of 375  
Phasis. Goods sold at a market are brought from the place from  
which the golden fleece was carried off across a hitherto unknown  
sea. The man born under this sign will also teach the birds of  
the air the language and feelings of men, joining them in a new  
form of intercourse and will teach them to speak, an art denied  
them by the law of nature. The Swan himself conceals a god and a 380  
god's voice within himself. He is not entirely a bird, but mur-  
murs inwardly to himself. Do not pass over those who rejoice in  
feeding the birds of Venus shut up in high lofts, returning them  
to the sky and calling them back with certain signs, nor those who 385  
carry round the whole city caged birds ready to do their bidding  
and whose whole wealth consists in a little sparrow. These and

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(1) 365 Reading feram. Housman reads feri.

Like arts does the golden Swan bestow.

When the Snake Bearer, surrounded by the mighty coils  
of the Serpent, comes into Capricorn's region, he makes serpents 390  
friendly to those born at that time. His offspring take them to  
their bosoms and flowing robes and kiss with impunity their  
terrible poison bearing mouths.

Whoever takes hold of life when the Fish comes forth  
from its native water, carries himself into the heavens and goes  
into an element belonging to others, will spend his years going 395  
around the sea shores or river banks, trying to catch fish swim-  
ming in water into which he cannot see and in his desire to get  
his hands on gleaming pearls, will descend into the middle of 531  
whirlpools and look around greedily and, immersed in water, will  
drag forth pearls together with their dwelling places and ram- 399  
parts of shell. No deed is more daring than this. A living is  
made from shipwrecks and bodies submerged in the depths are  
sought together with material objects, nor is the reward of such  
great effort always small. Pearls are valued as highly as landed  
wealth and because of their alluring glitter scarcely any man re-  
mains wealthy. The earth is weighed down by the produce of the  
deep. A man born under such a sign engages in an occupation by 405  
the sea shore or buys and sells the products of the toil of for-  
eign nations as a peddler of marine merchandise of various forms.

When the stars of Fides come up into the mighty heavens  
there are born investigators of crime, judges<sup>(1)</sup> of people on 410

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(1) 410 Reading iudex. Housman reads uindex.

trial, men who will discover what they have done from what they say in evidence and will bring to light crimes craftily concealed. Under it there come forth as well pitiless torturers and ministers of punishment, men who favour truth and hate crime and those who remove deep seated quarrels from men's hearts.

415

When the azure Dolphin lifts himself from the sea to the stars and comes forth with stars representing scales, an offspring equally at home on sea or land is created. For just as the Dolphin himself glides through the waters with his swift fins, now cleaving the top of the water, now the depths at the bottom of the sea, and gathers strength from the curvings of his body and looks and moves like a wave, in the same way, whoever comes from him, will swim swiftly among the waves. At one time he will put forth one arm after the other in slow movements  $\left\langle \begin{array}{l} \text{and, clearly visible,} \\ \text{will break the water, causing it to foam} \end{array} \right\rangle$  and causing it to sound by striking it, at another he will move his hands away from each other like a man rowing under water<sup>(1)</sup>, at another will walk upright in the water and, as if he were in shallow water, make the surface of the sea a plain; or he will keep his hands immobile against his flanks and back and will not weigh down the water, but will lie on top of the waves, suspended on top of them, carried along on the surface of the sea without any oars<sup>(2)</sup>.

420

425

430

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(1) 425 Reading furtiui remigis instar. Housman reads furtiua biremis in ipso.

(2) 430 Reading pontum...motus. Housman reads totus...uelum.

Others delight in seeking the sea in the sea, immersing their bodies in the waters and try to see Nereus himself in his cave and the sea Nymphs. They carry off the booty of the sea, namely ships that were wrecked and sucked down into the depths of the sea and greedily rummage in the sand at the bottom. Although 435 different, the followers of the two occupations are equal in ability and come from the same stock. You may also count as allied to these through their skill those who make upward leaps, moving alternately, propelled with great force by a see-saw; the one who was formerly<sup>(1)</sup> high in the air being now low down, the other 440 being suspended high in the air when the first one falls back. You may also count as allied those who shoot through flames and burning hoops and, imitating the Dolphin in their flight through the air, alight on the earth as gently as if they were diving into liquid waters and, though bereft of wings, fly and play in the air. 445 But if the offspring of this sign lack skills, there remain in them nevertheless qualities suitable for developing skills: nature will give them vigour, swiftness of foot and the ability to run on a level<sup>area</sup> as if flying.

Cepheus, coming to the sky on the same colure as water bearing Aquarius, will not produce men inclined to frivolity. He makes men who are stern of countenance, their brows showing the 450 seriousness of their minds. They feed on cares and ever turn

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(1) 440 Reading ante. Housman reads ille.

over the precedents of the men of old and praise the sayings of  
 sage Cato. Cepheus even makes the sort of man who feeds boys' 455  
 tender years, and, because his master still wears the toga of boy-  
 hood, follows him as if he were master himself and, whatever he  
 does, he believes, deceived by the semblance of authority, to be  
 the product of the condescension of a guardian or the severity of  
 an uncle. Moreover, men born under Cepheus will write words for  
 actors wearing the buskin of tragedy, whose style, although it is  
 written down, is yet itself blood-thirsty. The rolls will rejoice  
 in criminal characters and tumultuous situations just as much as 460  
 stage performances will. For they will delight in telling of the  
 grief of one who was a living sepulchre<sup>(1)</sup>, namely a father belch-  
 ing forth his children, of the sun revolving backwards, the day,  
 dark without the sun<sup>(2)</sup>, the war between the two brothers of the  
 one Theban mother and the man who was at the same time father and  
 brother, and of the sons of Medea, her brother and father, what 465  
 was in one respect clothing, in another fire, being sent as a  
 gift, Medea's flight through the air and the years added to  
 Aeson's life from his being immersed in fire. Cepheus' offspring  
 will put a thousand other situations into verse. Perhaps even  
 Cepheus himself will be included in the action. If a milder type  
 of man becomes eager to write, he will compose comic scenes at 470

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(1) 461 Reading uiui luctum memorare sepulchri. Housman reads  
uix una trium memorare sepulchra.

(2) 463 Reading sole. Housman reads nube.

joyful festivals, of youths burning with passion, girls ravished because of it, old men tricked, slaves handling everything with facility. With these characters, Menander, more sophisticated than his fellow citizens when the Greek language was in its prime, 475 extended his own existence for eternity. He showed life to life and immortalized it in his rolls. If a man's powers do not allow him to compose such great works, he will nevertheless be a fit person to act in plays composed by others, making his acting express the poet's intentions, at one time by his voice, at another by silent gesture or the display of emotion and will make the plays his own by his utterance and will act on the stage toga clad 480 men or great heroes of Greece. Alone he will go through every role and represent a multitude in the body of one person. He will manifest every vicissitude of fortune by means of his limbs and will accompany the chorus with parallel movements. He will compel those watching him to see Troy itself and Priam falling before their eyes. 485

Now I will tell of the constellation of the Eagle, which travels to the left of the Young Man who pours forth dew-like streams, the Young Man whom the Eagle himself lifted from the earth. He flies around his prey with wings outspread. This bird retrieves thunderbolts that have been hurled and performs military service on behalf of heaven. He marks the twelfth degree of Aquarius, pourer of a stream of water. A man born when he 490 is rising over the earth will grow up to live a life of despoiling

and plundering, gaining spoils even by shedding blood. When there are no men left to slaughter, he will turn to the slaughter of beasts, making no distinction between war and peace, citizen and foe. He is a law unto himself and his physical strength sends 495 him headlong wherever his desires carry him; scorn for everything is a virtue with him. If his vigour is directed to worthy goals, his evil designs turn into valour and he is enabled to finish wars and enrich<sup>(1)</sup> his native city with great triumphs. Since this bird does not wield Juppiter's weapons, but merely supplies them, 500 carrying thunderbolts back and returning them after they have been hurled, such a man will be the assistant in war to a king or a great general and will perform very useful services because of his powers.

When Cassiepia rises on the right hand of the Young Man who pours water, when twice ten of his parts have risen, she makes 505 goldsmiths, who can turn the one piece of raw material into countless different shapes, give a greater value to this previous metal and mingle brightly coloured gems with it. As a result of this art the gifts of Augustus to the temples he dedicated acquire their brilliance, luminous gold objects rivalling the rays of Phoebus, 510 fires pouring forth light from the air smitten with the sheen of the gems. As a result of this, the monuments of Pompey's triumph of long ago and the trophies bearing the likeness of Mithridates still remain, their lustre not lost through time, but

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(1) 499 Reading poterit ditare. Housman reads poterunt ornare.

ever gleaming with fiery rays<sup>(1)</sup>. As a result of this, how to 515  
 adorn one's figure meretriciously has been discovered and women  
 have tried to make their foreheads attractive with gold chaplets,  
 have put precious stones on their heads and around their necks  
 and wrists and gleaming golden sandals on their snow white feet.  
 What would Cassiepia, a married woman, prefer those born under her 520  
 to handle rather than what she can turn to her own uses when it  
 has been made? So that raw material should not be lacking when  
 these are the products it produces, she bids men look for gold  
 under the earth, drag all the secrets of nature from their lairs  
 and overturn the earth for profit, discover treasure among clods 525  
 of earth and finally bring unwilling nature to the light of the  
 sky it has never seen before. Her offspring will, in his greed,  
 even tell the tawny sands and drench the yet dripping soil from  
 the river bed with new water and produce small movements of the  
 balance by adding minute specks, or collect the wealth of Pactolus, 530  
 whose foam turns into gold, or heat lumps of silver bearing rock,  
 extract the latent silver ore and let the slag run away in a  
 liquid stream, or he will be a trader in the metals refined by 535  
 either process, ever changing and using one for the other. Such  
 are the talents Cassiepia gives to those born under her.

The constellation of Andromeda follows. She comes into  
 the sky in gold array to the right of the Fishes, when twelve of

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(1) 515 Reading die, semperque nitentia. Housman reads lues  
semperque recentia.

their parts have risen. In times of old the guilt of her hapless  
 parents caused her to be put out to pay their penalty, when all 540  
 the sea lay in enmity over the land<sup>(1)</sup>...and what was a kingdom  
 became a sea. Only one way of buying off the evil was offered:  
 to give to the raging sea Andromeda and let a monster devour her  
 tender limbs. This was her wedding - weeping she was bedecked as  
 a victim for punishment, assuaging the grief felt for the disaster  
 affecting all by the disaster to her family. She put on robes 545  
 prepared for no vows such as these. The funeral rites of the  
 Maiden were hurried forward while she was yet alive, and despite  
 the absence of a corpse. As soon as they came to the shore of the  
 hostile sea, her soft arms were stretched out on the hard rocks; 550  
 they bound her feet to the crags and set chains on her and on a  
 virgin cross the maiden hung to die. Even in her torment she pre-  
 served the modesty of her countenance, her punishment became her.  
 Reclining gently on the nape of her snow white neck, she was seen  
 to be herself the guardian of her beauty. Her robes slipped from 555  
 her shoulders, her dress from her arms and her flowing hair stuck  
 to her shoulder blades. Around her the kingfishers flew on their  
 wings, bewailing her and lamenting her fate in piteous song,  
 shading her with a dense covering of wings. The sea halted its 560  
 waves to behold her and ceased to drench the crags it was wont to  
 drench. A sea nymph lifted up her face from the clear surface of

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(1) In 542 I omit the corrupt imuit naufragia tellus.

the sea and in pity at her fate, bedewed even the waves. The wind  
itself, in a gentle breeze, refreshed her as she hung and sounded  
with piteous accents at the top of the rocks. At last a time of 565  
good fortune brought Perseus, returning from his victory over the  
monstrous Gorgon, to these shores and he whom his enemy had not  
fascinated with her face, on seeing the maiden hanging from the 570  
rock, stiffened and scarcely held his spoils in his hand. The  
conqueror of Medusa was conquered by Andromeda. Then he envied  
the very crags and called the chains that encircled her blessed.  
After he learned from the maiden herself the cause of her punish-  
ment, he vowed to win a bride by war with the sea, undaunted 575  
should a second Gorgon come. He spurred himself on in his flight  
through the air and brought back hope to her weeping parents by  
promising she will live and returned to the shore with the pledge  
of marriage. Already the sea had begun to surge with heavy swells  
and the waves to scurry headlong in a long line, driven by the  
weight of the monster. His head came forth as he broke the waves 580  
and he belched forth water; the sea resounded about him as it  
struck his teeth and water was sucked into and sailed around in  
his mouth. On the rest of his body rose immense coils and his  
back occupied all the sea. Everywhere the sea resounded and even 585  
the mountains and crags feared him as he rushed on. Unfortunate  
maiden, although you had such a deliverer, how terrified you  
looked! Your breath fled into the air. How the blood drained from  
your face, when you yourself saw from your hollow rock your 590

executioner swimming towards you and carrying the sea with him! 590  
How tiny a prey of the sea you were! Perseus shook his wings and  
flew upwards and from the sky hurled himself at his foe, thrusting  
into him a sword dyed in the blood of the Gorgon. His foe rose  
up towards him and lifted up his face, turning it away from the 595  
seething sea and, supported on his twisted coils, lifting him-  
self high up, darted up and carried himself aloft with all his  
body. But the further he darted upwards, throwing himself up  
ever higher from the sea, the further Perseus kept on flying back, 600  
fencing with him through the expanse of the sky and striking the  
monster's face as he came up at him. Even so, he did not yield  
to the hero, but raged and snapped at the air and his teeth grated  
in vain, causing no wounds. The sea spumed into the sky and with  
bloody waves, drenched Perseus as he flew and splashed the stars  
with its waters. The maiden, the cause of the battle, looked on 605  
at the battle and then, unmindful of herself, became afraid for  
her champion and sighing, was tortured more in mind than in body.  
At last the monster fell, his body pierced through and through,  
and, full of water, fell back again to the top of the waves and  
covered the great sea with his huge body, even then terrible and 610  
no fit sight for a maiden's eyes. Perseus washed himself in the  
clear sea, the conqueror, and flew from the sea to the lofty  
crag and freed the maiden hanging to the rock, now betrothed to  
him and destined to marry him with a large dowry provided by her  
husband. He it was who gave Andromeda a place in the sky and con- 615

secreted among the stars the reward of so great a fight, in which a monster no less terrible than the Gorgon fell and relieved the sea of its presence.

Whoever is born when Andromeda is rising from the sea will be pitiless, a dealer of punishment, or a warder of a harsh prison, before whose proud gates mothers of wretches will lie prostrate and fathers, in all night vigils, will ask to kiss their sons for the last time and transfer their sons' life breath to their own marrows. He will be an executioner, who will sell corpses and the right of cremation, for whom, with his axe often drawn, punishment will be a source of revenue, a man who could even look upon the maiden herself hanging from a rock. He will be the master of those in bonds, and sometimes their companion, the same chain being tied to him, so that he may preserve their guilty bodies for punishment. 620 625 630

When the twenty first part marks the threshold of the earth as the Fishes rise and gleams over the world, the Horse rises and travels swiftly through heaven. He will make those born at that time swift, keeping themselves wide awake through every task that they perform. One man will make repeated circuits of the training ring and, sitting proudly astride his horse, will wage arduous wars, a leader in the middle of his men. Another, by his swiftness, will be able to make men believe that the race track cannot possibly be as long as it is and that his horses are only pretending to touch the ground and by his swift 635

passage made an open space seem of no length. What messenger  
 will fly back more swiftly from the ends of the earth or more  
 640  
 swiftly or more nimbly penetrate to the ends of the earth? He  
 will heal the wounds of quadrupeds with the very commonest drugs;  
 he will know the medicinal herbs suitable for animals and those  
 which grow for human use.

A figure resting on his knee, whose Greek name is Engon- 645  
 asin and whose origin is disputed, from the right lifts up his  
 stars with the last part of the Fishes. Under him are born cow-  
 ards, deceivers, tricksters and footpads who are to be feared in  
 the middle of the city. If their minds are trained for any skills,  
 he makes them direct their attention to dangerous activities; 650  
 they sell their talents for dangerous enterprises. Daring to walk  
 on a thin line with no path to guide them, they step surely on a  
 taut horizontal rope. When they try to reach the sky, the manner  
 of walking they adopt is strange to them, and they nearly lose 655  
 their balance. Balanced unsupported, they balance the crowd's  
 hopes from themselves.

At the end of the Fishes and to their left rise the  
 stars of Cetus, pursuing Andromeda, both in the sea and in the  
 sky. He causes those born under him to slaughter sea creatures  
 and wound the scale bearing shoals, making them burn with eager-  
 ness to cast nets widely over the deep water and reduce the 660  
 amount of sea available to the fish by imprisoning them in nets.  
 They shut up seals, roaming carefree as if still in the open sea,

in prisons consisting of broad meshed nets and bind them with  
fettters. They drag in incautious tunny in what are called meshes.  
It is not enough for them to catch them. The fish strive to break  
the nets imprisoning them; they await a new crises, namely being 665  
slaughtered with steel. The sea is dyed with its own blood,  
mingled in it. Then also, when they lie as booty over the whole  
shore, there is a second cutting up of their cut up bodies: they  
are cut into pieces and different parts of the one fish are used  
for different purposes. One part is better if its juice is ex- 670  
tracted, another if it is retained. From the former precious gore  
flows forth, pouring forth the best of the blood. It improves the  
taste of food when used as a sauce. To make the other, putrid  
chopped up pieces are mashed together and mingled, each in its  
turn losing its proper shape, all going to make the one sauce for  
use on food. Or else, when a cloud of scale bearers stands still, 675  
looking very like the azure sea itself, and its fish are locked  
in immobility because of their numbers, they are swept up by a  
huge net cast around them and fill huge vats and wine jars and  
pour forth their liquid gifts together and with their inward parts 680  
disjointed, flow into liquid putrescence. Those born under this  
constellation will be able to fill large salt basins, evaporate  
sea water and separate the bitter element of the sea, when they  
bring into a solidly compacted level space with well defined  
boundaries water drawn from its native sea and prevent it going 685  
out by closing the entrances and cause the pool of water to spread

out over it in all directions. In this way the area receives the water and begins to gleam when the water has been evaporated by the sun. The dried sea water, the shorn whiteness of the deep, is collected for table use. They make huge mounds of stiff foam and change the poison of the sea, which makes its waters useless and pollutes them with bitter liquid, into life giving salt and render it health giving. 690

When the Great Bear, who revolves around the pole nose first, never dipping in the waters, but ever turning in a circle, directs her steps back in her everlasting journey to the place where her tracks begin [or when the smaller Little Bear rises at first light and, together with the huge Lion and the sharp stinged Scorpion, promises domination to the day at the very end of night] wild beasts will not look with hostile countenance upon those born at this time, but intercourse with such men will make them gentle and tractable. One man will be able to restrain savage lions with his hand, stroke wolves and play with captured panthers, nor will he flee powerful bears, the relations of this constellation, but he will teach them the skills of men and lead them into occupations contrary to their nature. Another will weigh down an elephant's back and make him move with the goad, making him walk clumsily with his great weight by pricking him. Another will take away a tiger's wild rage and pacify him. Whatever other animals on the earth infest its forests<sup>(1)</sup>, he will join to himself in friendship 700 705

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(1) 708 Reading siluas...terris. Housman reads siluis...terras.

and...keen scented dogs....

He has dowered the Pleiad sisters with the third magnitude. Their womanly faces are suffused with a red fire colour; he has found a like colour in you, Cynosura and in the fires which the Dolphin emits from his four stars and the Triangle from its three and he has found that the Eagle shines with the same light, as also the arching Snakes with their slippery backs. After these magnitudes, the fourth and the sixth and the magnitude which separates these totals are separated from the total number of stars. The greatest number of stars is in the last class. They neither shine every night nor all night, for they are removed from us by heaven's immense depths. But when bright Delia is journeying elsewhere and the planets hide their light under the earth, golden Orion has quenched his burning fires and Phoebus has passed through the signs and is changing the year to a new one, they gleam in the darkness and are lit up in the black night. Then one can perceive the gleaming temples of the sky studded with minute specks [ breath or these things should be lacking to the solids and this discord concordant ] and see the whole star studded sky gleam, observing that the stars are not fewer in number than flowers or grains of dry sand on the curved sea shore, but that, on the contrary, plentiful as are the myriads of leaves which fall in the woods, there are even more fires that travel through the heavens. Just as the people in huge cities are graded: the senators hold the first rank, the Equestrian order the next, the

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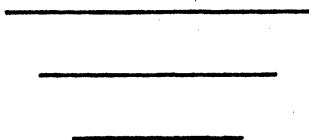
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people come after the equestrian order and inferior to the people you see the idle mob, the crowd with no name, in the same way there is a sort of state even in the mighty heavens, one which nature, which founded the city in heaven, establishes. There are stars like aristocrats, there are those in rank next to the first, there are grades and all the privileges proper to the higher ranks. The 740 common people, who are carried in the milky way, which occupies the top of the sky, are the most numerous. If nature had given them power in proportion to their numbers, the ether itself would not be able to endure the flames and the whole universe would burn, with the top of the sky set alight. 745



NOTES AND CONJECTURES ON THE ASTRONOMICAOF MANILIUS.BOOK 11.

iam propiusque fauet mundus scrutantibus ipsum 11

et cupit aetherios per carmina pandere census.

hoc sub pace uocat tantum.

11 iam propiusque fauet mundus GL, iam propius mundusque fauetUHR, iamque fauet mundus propius Bentley.

Note that uocat in line 13 is an alternative spelling of uacat. In his editio maior Housman adopted the reading of UHR, tandem, in line 13. In his editio minor he changed his mind, and read tantum, with GL.

The point at issue is whether the text of GL should be adopted in line 11 or the text of Bentley. The text of GL: iam propiusque fauet mundus scrutantibus ipsum, "Now the universe shows greater favour to those who study it", requires one to construe propius with fauet, that of Bentley iamque fauet mundus propius scrutantibus ipsum requires one to construe propius with scrutantibus. Bentley's text of line 11 means "Now the universe shows favour to those who study it closely". This implies that previously the universe did not show favour to those who studied it closely. But, according to Manilius, the universe has shown favour to those who study it ever since the time of the Babylonian

priests and kings (1.40ff) who primi...per artem/sideribus uidere uagis pendentia fata. Thus Bentley's text does not give a suitable sense, and the reading of GL should be retained.

Bentley further objects to the text of GL that in it illud que loco uenit non suo. Housman replies that que secundo loco positum est, ut falsa incertaque omittam, in 270 missurus iam-que sagittam et 11 723 pluribus inque modis. In his addenda he defends the conjunction of propius and fauet by adducing the similar usages of propius in Quint.inst.x 1 91 quem praesidentes studiis deae propius audirent?, Mart.1 70 15 propior quam Phoebus amet and Luc.x 47 propius timuere sarisas.

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2

certa cum lege canentem

22

mundus et inmenso uatem circumstrepit orbe  
uixque soluta suis inmittit uerba figuris.

The idea in mundus...circumstrepit in line 23 is "I can't hear myself think because of the sound of the sky revolving about me". Manilius also refers to the sound of the sky in 1.444 axem...mundi stridentem pondere. There is no reference to the harmony of the spheres, as Sherburne (op.cit.p 3) assumes. The harmony of the spheres is concordant music, not discordant noise.

In 24 soluta uerba means "prose", as Bentley says. But the meaning of suis figuris is disputed. Bentley interprets it: suis figuris, id est, suis circulis et diagrammatis; sine quibus

astronomica tradi et doceri nequeunt. Bentley takes suis as referring to mundus. I do not believe Bentley's interpretation is correct. Manilius often uses the word figura, but nowhere else in this sense, in fact he does not elsewhere mention diagrams, although 2.299 aut trinis ac binis signis ornare trigonum, 314 ff and 334 aut trinis paribus (sc. lineis) facies cum membra trigoni, imply their use. Van Wageningen interprets suis figuris as signa caelestia, quoting the use of figuris in 1.254. Like Bentley, he takes suis as referring to mundus. In 1.254, however (summaque per uarias maneat cognata figuras) the uarias figuras consists of diuersa forma/aeris atque ignis, terrae pelagique iacentis (248-9). It is only in 255 ff (nunc tibi signorum lucentes undique flammis/...ordinibus certis referam) that Manilius begins to talk of the constellations. Figurae mean signa caelestia in 2.383 sic, quamquam alternis, par est natura figuris and 3.676 una ergo in tropicis pars est cernenda figuris. In 3.669 sed non per totas aequa est uersura figuras, either figuras means signa caelestia or, as Housman remarks, figurarum nomen hoc uersu pro formis corporibusue signorum accipi potest.

↳ 2.454 (quoted by TLL 6 720 40-44 with these usages) singulaque in propriis parentia membra figuris, is corrupt. An attractive conjecture of Housman - to rewrite the line singulaque inperis propriis parentia membra, removes figuris altogether. Even if figuris is retained, its sense is uncertain. 1.450-1 and 3.169, also quoted by TLL together with these passages, exhibit,

as Waszink (op.cit.p 590) sees, different uses of figura.

Housman interprets suis figuris as τὰ σχήματα τῆς λέξεως, quoting the usage of figuris in 4.805 nominaque innumeris uix complectenda figuris. He refers suis to soluta uerba. In favour of thus taking figuris as concerned with the mechanics of writing, note that Manilius has already said that the mundus surrounds him certa cum lege canentem and has contrasted this poetic utterance with prose (soluta uerba). The context thus favours Housman's interpretation. Elsewhere too (2.755-63, 3.34-5, 4.430-3) Manilius talks of the construction of words and sentences. An objection to Housman's interpretation is that it is more natural to refer suis to mundus, the subject of the clause, than to soluta uerba, its object. In notes written on a rough draft of this note, Dr. Jocelyn communicated to me these objections to Housman's interpretation: "How can prosaic words be said to own figurae? Figurae are essentially artificial, i.e. the products of art. τὰ σχήματα τῆς λέξεως belong to prose, not to poetry. Housman's interpretation would be satisfactory if an orator was talking about his difficulties of expression. Cf. Cic.orat.149 ut forma ipsa concinnitasque uerborum conficit orbem suum".

I am unable to decide between Van Wageningen's and Housman's interpretations. I give Housman's in the translation rather than leave suis figuris untranslated.

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3

tum qui templa sacris coluerunt omne per aeuum 46  
 delectique sacerdotes in publica uota  
 officio uinxere deum;

Housman's note on line 47 is obscure. It reads: 47 691  
extremamque Sagittari laeuam atque sagittam, V 454 tutorisue  
supercilium patriuue rigorem, tum l 350 et finitur in Andromeda  
succedit iniquo, ll 685 sidera quadrata efficiunt non lege quad-  
rati; accedat ex Breiteri emendatione ll 171 ut Capricornus et  
intentum qui derigit arcum. What Housman means is that there is  
 nothing wrong with this line either in word order, metre, or para-  
 taxis. The subject of the qui clause in 46 is sacerdotes, which  
 is only given in the following line 47. In other words, the order  
 in which 46-7 must be read is tum sacerdotes qui...delectique.  
 There is nothing wrong with this, for 1.691 extremamque Sagittari  
laeuam atque sagittam, must be taken in the order sagittamque  
Sagittari extremam atque laeuam and 5.454 tutorisue supercilium  
patriuue rigorem must be taken in the order supercilium ~~/et~~ rig-  
orem tutorisue patriuue. Almost all lines in Manilius have either  
 a strong caesura in the third foot or a strong caesura in both the  
 second and fourth feet. Line 47 has no caesura in the third foot,  
 and, while it has a strong caesura in the fourth foot, it has only  
 a weak caesura in the second. But that does not show it is spur-  
 ious or corrupt. Line 1. 350 et finitur in Andromeda succedit  
iniquo similarly has no caesura in the third foot and yet only a

weak one in the second. Line 2.685 is even more unusual metrically. It reads sidera quadrata efficiunt non lege quadrati. It has no caesura in the second or third foot.

The clause qui templa sacris coluerunt omne per aeuum and the phrase delecti sacerdotes in publica uota are joined to each other by que. That does not show that 47 is spurious or corrupt. In 2.171 ut Capricornus et intentum qui derigit arcum, as Breiter's correct conjecture et intentum qui (intentum qui M, qui intentum L, et hic qui intentum G) allows us to see, a noun is joined by et to a qui clause.

4

nam rudis ante illos nullo discrimine uita           66  
 in speciem conuersa operum ratione carebat  
 et stupefacta nouo pendebat lumine mundi,  
 tum uelut amisso maerens, tum laeta renato.  
 <nec totiens Phoebum redeuntem mane fugatis>  
 sideribus, uariosque dies incertaque noctis           70  
 tempora nec similis umbras, iam sole regresso  
 iam propiore, suis poterat discernere causis.

69 amisso Breiter, amissis O. renato Breiter, renatis O.

I have marked a lacuna after 69, a lacuna in which I believe a verse such as nec totiens Phoebum redeuntem mane fugatis fell out.

72 poterat discernere already occurs in the third edition of Scaliger (I do not have access to any earlier editions) poterant discernere O, impar discernere Bentley, discernere nescia Housman.

In lines 66-72 there are two faults in the text transmitted by the manuscripts. Firstly, according to the manuscript tradition, what Manilius says in 69-70: tum uelut amissis maerens tum laeta renatis/sideribus, is that early men mourned the disappearance of and were joyful at the reappearance of sidera (the stars or the planets or both). But this behaviour would be most unnatural. Men throughout the ages have rejoiced at the appearance and mourned at the disappearance of the sun and in the other places where this story about early men is told, it is the sun whose appearance early men are said to rejoice over and whose disappearance they are said to mourn. The story was current before Lucretius' time - apparently common - for he takes the trouble to deny it specifically in 5.973-4 (nec plangore diem magno solemque per agros/quaerebant pauidi palantes noctis in umbris). The story is also mentioned by Statius, Theb.4.283 (hi <Arcades ueteres> occiduum longe Titana secuti/desperasse diem) and by Dracontius de laud.dei 1.418 (nec lucem remeare putat terrena propago).

That, according to Manilius, it was the sun whose disappearance men mourned and whose reappearance they rejoiced over, is evident from line 68 (et stupefacta nouo pendebat lumine mundi) for the lumen mundi is the sun. Cf. 4.764-6 Rhodos.../tumque domus uere Solis, cui tota sacrata est,/cum caperet lumen magni sub Caesare mundi.

The second fault in the transmitted text is that a negative particle or its equivalent is lacking in the clause

beginning with uariosque in 70 and ending with line 72. Bentley comments on the transmitted text as follows: "Quid ait? Poteratne rudis uita suis causis discernere uarietatem dierum, noctium et umbrarum? Sic uerba, ut feruntur, affirmant. Sed auctor hoc uolebat, non poterat discernere: et idem uoluerunt interpretes, uerbis utcumque inuitis. Fefellit hos particula negatiua nec, nec similes umbras quam ad poterant referebant, ut sit nec poterant. Atqui nec similes separari non possunt: idem quod et non similes, et dissimiles."

Both these faults can be removed by the assumption of one error in the manuscript tradition and consequent interpolation. The error consists in the omission of a line after 69. The line lost contained the negative particle required for lines 70-72 and a word such as fugatis which agreed with sideribus. When the line was omitted, sideribus was left with nothing agreeing with it. To restore grammar and a semblance of sense, amisso was changed to amissis and renato to renatis.

Breiter removed both manuscript faults by reading tum uelut amisso maerens, tum laeta renato/sidere, nec uariosue dies incertaue noctis/tempora, nec similes umbras. The change of uariosque to uariosue and incertaque to incertaue is misguided, for, as Housman on l.475 remarks, que is found so often in the manuscripts of Manilius and other poets as a particle continuing a negative, that all the examples of its occurrence cannot have arisen from scribal error. Moreover, the particles in 69 are

co-ordinate with nec similes in 70, which is the equivalent of et dissimiles. Que-que, not ue-ue, should be co-ordinated with et. Even if que-que is retained in 69, Breiter's conjecture involves a most unlikely collocation of particles. Manilius does not elsewhere after nec or et join the first of two or more words to the others of the same series with que or ue except in double que or ue endings (eg. 5.49 nec...facietque tegetque) Even when there is no initial nec or et, Manilius does not join the first of three or more nouns to the next with que unless there is a noun in apposition to all these nouns preceding them (as in 1.772 ff prudentes uiri...iustusque Solon fortisque Lycurgus/aetheriusque Platon et qui fabricauerat illum). The only exception is in 2.629 (Quos Geminique dabunt Chelaeque et Aquarius ortus) where Gemini was restored in this position by Housman. In Breiter's reading, the particle nec in 69 looks as though it should be parallel with nec in 70, but, as nec similes means et dissimiles, it cannot be.

Two scholars before me have suspected that the required negative particle for lines 70-72 has been lost in a lacuna. Garrod (p xxi of his edition of Book 2) says "after 68...I think it probable that a line has been lost - something after this sort, necdum homines, cum mens formidine pressa iaceret, which will enable us to interpret 72." Van Wageningen (Mnemosyne 62,1913, pp 194-5) declared "uerum sententia diu multumque reputata malim credere aut in us. 70 lacunam statuendam esse aut Manilium errasse". The lacuna would presumably be marked after sideribus

in verse 70. But these suggestions only remove one corruption. I believe the lacuna occurred in the place I suggest because then both the corruptions I have discussed can be simultaneously removed.

It is necessary to change poterant in 72 to poterat, because the subject of the verb is the uita of line 66.

---

5

ignis in aetherias uolucer se sustulit oras	149
... proximus in tenuis descendit spiritus auras	152
aeraque extendit medium per inania mundi.	153
tertia sors undas strauit fluctusque natantis,	155
aequoraque effudit toto nascentia ponto,	
ut liquor exhalet tenuis atque euomat auras	
aeraque ex ipso ducentem semina pascat	158
ignem flatus alat uicinis subditus astris.	154
ultima subsedit glomerato pondere tellus.	159

154 was transposed to follow 158 by Housman. He comments: "154, quem nullo nexu prioribus cohaerere uere dixit Bentleius, post 158 collocaui: nimirum transiluerat scriba ab aeraque 153 ad aeraque 158...alat Bentleius (qui cum uersum sede non moueret etiam ut ante flatus inseruit) alit libri propter extendit u.153". There is another reason for accepting Housman's transposition. 149-50 describe how the fire, 152-3 the air, 155-6 the water, went to its place. 157-8 and 154 describe how the water feeds the air, the air the fire. If 154 were retained in the manuscript position, 152-4

would, as well as describing how the air went to its place, give the irrelevant detail that the air feeds the fire.

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6

quod ni librato penderet pondere tellus, 173

non ageret cursus, mundi subeuntibus astris,

Phoebus ad occasum et nunquam remearet ad ortus.

175 ad occasum Q, ab occasu Bentley.

"174 subeuntibus, sub terra commeantibus, ut 181 subeat; errat enim Bentleyus, cum sententia sit "non sub terra irent mundi astra, Phoebus ab ortu ad occasum cursus agente" id est interdiu. hoc dicit: ni penderet tellus, neque astra interdiu infra eam currere neque sol noctu posset; quod tamen utrumque fieri manifestum est" Housman.

Bentley's error consisted in thinking that subire must mean "appear" in line 174, and hence ad occasum was corrupt. Bentley's words are: "certe cum mundi astra in conspectum subeunt, sol ab occasu, non ad occasum se fert; hoc enim interdiu facit". Gould (op.cit.pp 102-3) accepts Bentley's emendation ab occasu and attacks Housman's explanation of the manuscript reading on two grounds. "In 175" he declares, "Bentley's necessary correction ab occasu for ad occasum is wrongly rejected by Housman, who wants to extract the following meaning (excellent in itself): "If the earth were not poised in space, the stars would not go beneath the earth by day (while the sun revolved from east

to west) nor would the sun go beneath the earth by night". I may instance this as another error arising from a misplaced zeal for symmetrical argument: no instinctive feeling for Latin has prevented Housman from construing an ablative absolute as the main clause and turning the main clause into an ablative absolute". Goold here charges Housman with ignorance of Latin, but the charge is unjustified. In 5.270-2 (at, cum per deciman consurgens horrida partem/Spica feret prae se uallantis corpus aristas, /aruorum ingenerat studium rurisque colendi) the participial phrase governed by consurgens is grammatically subordinate to the clause governed by feret, but it is the phrase which contains the idea essential to the sense; the idea contained in the clause is an ornamental addition not necessary to the sense. In the same way, in 1.174-5, the phrase mundi subeuntibus astris contains the idea essential to the sense, the clause, to which it is grammatically subordinate, an idea not necessary to the sense.

The second ground on which Goold attacks Housman is: "After this, it is hardly worth a mention that on Housman's interpretation there ought to be a second ablative absolute or its equivalent meaning "by night"." Goold seems to mean that, in 174-5, if Housman's text and interpretation are accepted, the clauses non ageret..ad occasum and nunquam remearet ad ortus are placed in antithesis. The first means: "the stars would not go under the earth by day" (ageret cursus Phoebus ad occasum meaning simply by day, mundi subeuntibus astris containing the main idea).

Hence the antithesis requires the second clause to mean: " the sun would not go under the earth by night". But, says Goold, there is nothing in the second clause meaning "by night". It is true that the antithesis would be clearer if there were a phrase meaning "by night" in the second clause, but Manilius is often far from clear. Anyone under the impression that Manilius would have made the antithesis clearer here, could mark a lacuna after 175, a lacuna in which a phrase meaning "by night" was lost. Thus, even if Goold's second assertion is correct, it does not show Housman's text and interpretation to be incorrect.

Bentley's conjecture ab occasu is a small change from ad occasum, and if it is read, the lines make good sense. Nevertheless it is unlikely, because of the elision it introduces between occasu and et. There are no certain examples of the elision of long u in Manilius and only one example of the elision of a long vowel at the diaeresis of the second foot (illi ac at 4.445) and that occurs in the passage listing the partes damnandae, a passage in which, in order to fit a series of numbers into verse, Manilius allows himself proportionately far more elisions than in the rest of the poem. The passage occupies 54 lines (4.444-497), 1.25% of the extant lines of the poem, but contains 10.4% of all the elisions at the diaeresis of the second foot. About 4,300 lines of Manilius' poem are extant. But in all these lines there are only 15 certain examples of the elision of long vowels other than o; (final o is frequently treated as anceps even in Augustan poetry).

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7

haec aeterna manet diuisque simillima forma,           211  
 cui neque principium est usquam nec finis in ipsa,  
 sed similis toto orbe manet perque omnia par est.  
 sic tellus glomerata manet mundumque figurat.

212 ipso O, ipsa dett.

213 toto orbe manet Pingré, toto ore sibi Bentley, torno remeat  
Housman (ed.min.), toto remanet O.

The forma Manilius is discussing in 211-13 is a sphere. Pingré's toto orbe manet is probably what Manilius wrote for the corrupt toto remanet. Manilius could, less probably, have written toto orbe sibi (the manet element in the manuscript remanet coming from the following verse), or torno remeat, or it may be that Housman was right in his suggestion in the commentary to his editio maior, that a verse has fallen out after 211.

If orbe manet is right, then intra quattuor uersus ter legitur manendi uerbum (Housman). Cf my note on repetition on 5.461 and the index s.u. "repetition". Goold (op.cit.p 99) objects to Pingré's orbe that "it makes Manilius say in effect orbis toto orbe similis est". That is not true. What Manilius says is: haec forma (211) (sc. sphaera) toto orbe (sc. superficie) similis est or, as Pingré himself translates line 211: "elle se ressemble dans toute son étendue, par-toute elle est la même". But even if it were true, it would be unobjectionable in Manilius. In 1.539-40 quantum conuexo mundus Olympo/obtineat spatium, mundus

and Olympe mean the same, in 1.706 semita...quam terit assiduo renouans iter orbita tractu, semita and iter mean the same and orbita and tractu mean the same. Likewise, in 1.709-10 uiam.../quam mouit uertex, uertex and uiam mean the same and in 4.830 uomit Oceanus pontum, Oceanus and pontum mean the same. The most striking case is provided in 1.723 ff: duplicis extrema cauernae/caeli...oras...iugant (the joins cause the joins (i.e. themselves) to join). Cf. also Housman on 2.377 (uis...mittit uires) and 4.448. Goold champions Bentley's conjecture, quoting passages in support of sibi, but he does not answer Housman's objection to ore: "toto ore sibi Bentleius, ore pro facie uix recte posito". Goold is wrong, incidentally, when he claims that Pingré, not Housman, was the first to deny ore could mean superficie. Pingré says of Bentley's emendation: "hanc emendationem ultro admitteremus, si ab uniuersis codicibus minus recederet".

Goold rejects Housman's 1932 proposal torno remeat as "invalidated by the inappropriate idea of motion which it introduces". Goold claims, in other words, that a sphere, an abstract concept, cannot "revolve like a lathe". But the abstract concept of a sphere probably meant very little to Manilius' non mathematical Roman readers. Just how unmathematical they were appears from 2.297-351, on which Housman comments: "quae tribus uerbis Geminus tradit 2 7...ea Manilius ut popularibus suis, si forte possit, inculcet, per uersus amplius quinquaginta omni ope adnitiur: tantae molis erat Romanam gentem bis bina quot essent perdocere". Hence, it is quite possible that, to give the





of what he was talking about, Manilius could have compared a sphere to a familiar concrete experience - a revolving lathe. In 1.24 (mundus et immenso uatem circumstrepit orbe) and 1.444 (axem... mundi stridentem pondere) Manilius speaks of the sphere of the heavens as if it were like a familiar terrestrial object, such as a cartwheel or lathe.

It may be that Housman was right in his suggestion in his editio maior: "ceterum cum sic - if Pingré's emendation is accepted - intra quattuor uersus 211-214 ter legitur manendi uerbum, neque cur ipsa in ipso mutatum sit - in 212 ipso is the reading of GLM, ipsa is a conjecture - ratio reddi possit, ualde suspicor unum uersum excidisse, ut haec fuerit orationis forma, < quippe animal deus est rapida uertigine gaudens, > cui neque principium est usquam nec finis in ipso/sed simile < e > toto remanet perque omnia par est. Housman's supplementary line contains a reference to God revolving. A similar reference is found in 4.917 ipse deus.../uoluendo semper seque ipsum inculcat et offert.

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8	te testem dat, luna, sui glomeraminis orbis,	221
	quae cum mersa nigris per noctem deficiis umbris	
	non omnis pariter confundis sidere gentes,	
	sed prius eoae quaerunt tua lumina gentes,	
	post medio subiecta polo quaecumque coluntur,	225
	ultima ad hesperios infectis uolueris alis,	
	seraque in extremis quatiuntur gentibus aera	

223 gentes O, languens Gain.

224 gentes O, terrae Burman the elder.

225 & 226 were declared spurious by Bentley.

226 ultima...infectis...alis O, tum uice...infecti...axis, Housman.

227 extremis O, hesperiis Goold (accepting Bentley's deletion of 225-6).

In the manuscripts the word gentes ends two successive lines, 223 and 224. Bentley and Burman were of the opinion that Manilius would not have allowed such a repetition. Both thought it was the second gentes which was not written by Manilius and independently conjectured terrae. This conjecture is accepted by Housman. We do not really know whether Manilius would have disliked the repetition of gentes here. We can only guess from what he writes elsewhere. There is no exact parallel to the gentes-gentes repetition in any other extant verses, but some repetitions in successive lines are similar. At the end of two successive lines and in the one sentence we find: trigona, trigono (2.523-4), ipse, ipso (4.537-8), dona puellae, ipsa puella (5.254-5), longior horis, Capricornus in horam, Aquarius horam (3.457-9). Compare also : nam quis ab extremo citius reuolauerit orbe/nuntius extremumue leuis penetrauerit orbem (5.640-1). In different sentences there occur: ipse, ipsos (1.700-1), ignes, ignem (1.846 & 849 - two successive lines), auctu, auctis (3.410 & 413 - two successive lines), orbe, orbe (3.369-70) See also my index s.u. "repetition", my note on 5.356 and Housman's note on 1.224 for further examples of repetition in Manilius.

Perhaps, if one of the gentes is corrupt, it is the first which is corrupt. Instead of gentes in 223, did Manilius write languens? If he did, the manuscripts probably have gentes instead of languens at the end of 223 because a scribe's eye wandered from the guens of languens to the gentes ending the following verse.

Languere refers to the situation at a lunar eclipse in 4.845: haec quoque signa suo pariter cum sidere languent. (suo sidere: luna ibi constituta Housman) Tacitus uses languescere of the moon when being eclipsed, in Annal.1,28,1: luna claro repente caelo uisa languescere.

Bentley deleted 225 and 226. His argument against 225: "subiecta, quod oportuit subiectae, ut supra eoae terrae" is weak. But his arguments against 226 in its manuscript form (ultima pro denique, postremo ne latine quidem. Et uolueris alis monstrose.. nihil stultius. Certe si alas habet non uoluitur sed uolat) show that it is either spurious or corrupt.

Housman conjecturally restores the line as follows: tum uice ad hesperios infecti uolueris axis. He explains uice... axis as curru locum ex loco mutante. Coold gives the meaning Housman intends by translating: "then under the motion of its darkened car it revolves to the peoples of the west". However, he calls Housman's attempt to emend the verse "grotesque and unconvincing", but offers no arguments in support of this assertion. I cannot see anything to object to in Housman's reconstruction.

The senses he attributes to uice and axis are found elsewhere. Vices (plural) is used of movement across the sky in Manil.1.637: hic mutat per signa uices. Axis means currus in Ou.met.2,59 and Her.4,160 and in other authors. Inficio means "darken" in Ou. Trist.4,2,4 turaque in igne sonent, inficiantque diem (the meaning of inficiant here can be seen from Ou.met.13 601 f, nigri que uolumina fumi/infecere diem) and Claud. in Ruf. 1.129-30 hinc dea prosiluit Phoebique egressa serenos/infecit radios (infectus does not mean "tainted" in Manil.1.226 (i.e. influenced by witchcraft) unless the verse is spurious, for Manilius did not believe the common ancient idea (recorded in Mart.12.57.16-7: aera uerberent. .cum secta Colcho luna uapulat rhombo) that lunar eclipses were caused by witchcraft, but knew the true reason for them, as is clear from 2.96-8). Voluere is used of the motion of a heavenly body across the sky in Manil.1.447: ultima, (sc.sidera) quae mundo semper uoluuntur in imo.

Goold declares, in discussing 227: "About the corruption of extremis there can be no two opinions. With 225 f imputed to medieval interpolation, one need not hesitate to restore: seraque in hesperiis quatiuntur gentibus aera. "and only later is the brass clashed in the western lands". Compare 637f. seu quis eos/seu petit hesperios". If 226 (which contains hesperios) is genuine, then there is no need to emend extremis to hesperiis. Extremus and ultimus are often used of the west (eg, in Cic. pro Sulla 57: in ultimas terras, Virg.Aen.7.225f, et si quem tellus

extrema refuso/summoet Oceano, 8.333: pelagique extrema sequen-  
tem, Liu.5.37.2 ab Oceano terrarumque ultimis oris, Vell.Pat.1.2.3  
in ultimo Hispaniae tractu, in extremo nostri orbis termino, Luc 3.  
 454 Hispanas acies extremaque mundi, 4.1.extremis terrarum in oris,  
 4.147 tendit in ultima mundi, 8.797 terra extrema, 9.430 extremo  
ab orbe, 474 in extrema tellure, Calp.Sicul.4.38-9 ultima litora  
terrarum, 43 extremo in orbe, Sil.1.270 <Hannibal> extremis pulsat  
Capitolia terris, 3.283 Hesperidum ueniens lucis domus ultima  
terrae, 5.272 extremae cultor harenae, 15.528 extremo de litore,  
 638 extremo sub axe, 16.289 extremo ab orbe, Rut Namat.1.503 ex-  
tremum pars illa in orbem (sc.Britannia), Aus.393.3 extremis posi-  
tus telluris in oris). If, however, 226 is spurious, Goold's  
 emendation is probably correct. Nowhere else, as far as I know,  
 is extremus or ultimus used of the far west in contrast to eous  
 or the like.

2

hanc ubi ad occasus nostros sol aspicit ortus, 242

illic orta dies septimas excitat urbes

et cum luce refert operum uadimonia terris;

nos in nocte sumus somnosque in membra locamus. 245

242-3. hanc ubi ad occasus nostros sol aspicit ortus,/illic orta  
 dies O. hanc ubi ad occasus nostros sol aspicit ortus,/illic alma  
 dies Bentley. hanc ubi ad occasus nostros sol aspicit actus,/illic  
 orta dies Housman. has ubi ab occasu nostro sol aspicit oras,/illic

orta dies, Goold (op.cit.pp 101-2). Ab occasu nostro had already been conjectured by Scaliger.

"242 quae sententia requiratur perspicuum est, "hanc partem australem ubi sol nobis occidens aspicit, illic dies oritur"; itaque Bentleyus tradita uerba sic interpretatus est, hanc ubi ad occasus nostros positus sol oriens aspicit, quod per se quidem optimum est sed orta u.243 seruari non sinit, pro quo Bentleyus scripsit alma". Housman.

Housman states that Bentley's interpretation "orta u 243 seruari non sinit", presumably because, if read in 243, orta would mean oriens, just as ortus in 242, and this repetition of the same word to form a combination (orta dies) of the same meaning as the combination just preceding (sol...ortus) would not have been made by Manilius. I do not know whether this is true or not. There are many repetitions within a brief space in Manilius (see my index s.u. "repetition"), but no exact parallel to this that I can find.

The repetition has been removed in various ways. Bentley's alma for orta in 243 is not very good palaeographically. Housman's actus for ortus in 242 is not much better. He tries to defend the change by stating that the same change has occurred in verse 149 of the Culex, where the Vossianus reads acta ("recte ut uidetur") the Bembinus orta, but the situation there is not the same as in Manilius. In Culex 149 the word preceding the acta of the Vossianus, orta of the Bembinus, is sonat. If acta was the

original of these readings, then it is probable that the ac was omitted after at by haplography and the gap filled in with or. Alternatively, if orta was the original, sonat orta could have changed to sonat acta by dittography.

Scaliger's ab occasu nostro by itself is no improvement on the manuscript ad occasus nostros. Goold uses it as a part of his own reading: has ubi ab occasu nostro sol aspicit oras/illic orta dies. This involves several changes. That of ad occasus nostros to ab occasu nostro and of ortus to oras are palaeographically good, but that of hanc to has is not so good. His defence of this change: "if oras were corrupted through ortis to ortus, the further alteration of has would be compulsory" is extraordinary. Why should anyone want to change has to hanc because oras had been changed to ortis or ortus?

Goold declares that "in 242 ortus can scarcely be correct: if you want to express the meaning "When the sun sets here, it rises there", the one thing you must avoid saying is "When the rising sun sets here, it rises there". But this does not show ortus in 242 is corrupt. For, if one reads the manuscript reading of 242, one does not have to take ortus as an epithet of sol. The line makes good sense if ortus is taken closely with aspicit, aspicit...ortus being the equivalent of cum oritur aspicit. The translation then is "When the sun, setting for us, is rising upon and looking at this part....".

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10

primumque canentur 256

quae media obliquo praecingunt ordine mundum  
solemque alternis vicibus per tempora portant.

Manilius is here talking of the constellations of the zodiac.

Housman's note on 258: "258 tempora, annum, "les saisons":  
errant Fayus et Pingraeus" is far from clear. Annum and "les  
saisons" are not Fayus' and Pingré's interpretations of tempora  
but Housman's own. Fayus' interpretation of per tempora is per  
certa spatia temporis and Pingré's is tour à tour.

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11

proxima sors Cycni, quem caelo Iuppiter ipse 337

inposuit, formae pretium, qua cepit amantem,

cum deus in niueum descendit uersus olorem

tergaque fidenti subiecit plumea Ladae. 340

nunc quoque diductas uolitat stellatus in alas.

"Next to his is the abode of the Swan, whom Juppiter himself  
placed in the sky, as a reward for his beauty, by which he gained  
possession of his admirer, when, though a god, he descended changed  
into a snow white swan and in feathered form copulated with the un-  
suspecting Leda. Now too the Swan's wings are outstretched, as he  
flies among the stars".

Several points need discussion. Amantem here has a non  
sexual sense and means "his admirer". It cannot have a sexual

sense, for Leda had no thought of copulating with the swan. When Juppiter, under the disguise of a swan, started copulating with her, he took her by surprise (in 340 Manilius calls Leda fidenti. Fidenti here means, as Housman states, nihil suspicanti). Amo is similarly used of a male animal pet (Juppiter, in the form of a bull, who all the time desired to copulate with Europa without her being aware of it until too late) in Hor.carm.3.27.46-9: (in direct speech put into the mouth of Europa) lacerare ferro et/frangere enitar modo multum amati/cornua monstri./imprudens liqui patrios penates.

Cepit here probably means both "forceably constrained" and "deceived". Ovid emphasises the deception practised on Leda in Her.17.55-6: dat mihi Leda Iouem Cycno decepta parentem/quae falsam gremio credula fouet auem, Am.1.3.22 quam fluminea lusit adulter aue and 1.10.3-4: Qualis erat Lede, quam plumis abditus albis/callidus in falsa lusit adulter aue. Compare also Manil.2.31: et furto Cycnum...ad sidera ductum.

Terga subiecit means "copulated". Terga simply means "body". Housman remarks: "340 terga, corpus, non dorsum: Verg. Aen.1.635 terga suum pro suibus, VII 20 terga ferarum pro ferina forma". Housman quotes further in the addenda Pro.1V 5.13sq (Acanthis) audax...sua nocturno fallere terga lupo and Ou,met.2.9 sq. ballaenarum...prementem (elidentem)/Aegaeona suis inmania terga (corpora) lacertis.

341 means, I believe, "Now too the Swan's wings are outstretched, as he flies among the stars". Nunc quoque is dependent

on diductas and in diductas alas on uolitat. Housman comments: "ordo est uolitat in diductas alas, nam stellatus in alas nihil est, falliturque Bentleius ad V 24. Cynus ita uolitat ut diductas alas nobis ostendat: similia sunt Prop. IV 8 44 reccidit inque suos mensa supina pedes, Man. V 38 suos puppis consurgit in ignes, 206 in uastos surget Nemeaeus hiatus". The Swan's wings are outspread in the sky because they were outspread when he copulated with Leda. Ovid says that the swan's wings were outspread when he copulated with Leda in met. 6.109 fecit olorinis Ledan recubare sub alis. The photographs of reliefs of Jupiter and Leda in Roscher: "Lexikon der Griechischen und Römischen Mythologie", Band 2, 2 columns 1927 and 1930, show Jupiter in the form of a swan, with wings outspread, copulating with Leda.

Goold reads the same text as I do, but his translation is very different. It reads as follows (op.cit. p 103): "Hard by is the place allotted to the Swan, which Jove himself placed in the skies as a reward for the shape under which he secured the object of his love, when disguised as a snow-white swan he swooped down to earth and in feathered form approached the unsuspecting Leda. Its outspread wings figured by stars, the swan flies even yet".

Note that Goold translates amantem as "the object of his love". Amantem cannot have this passive sense, but Goold's rendering makes good sense. What he is unwittingly translating is amatam, which may be the true reading here. Cf. Prud. con. Sym. 1.161



in poenas signata suas iuxtaque relictam  
 Andromedan, uastos metuentem Pristis hiatus,  
 [expositum ponto deflet scopulisque reuinctam]  
 ni ueterem Perseus caelo quoque seruet amorem  
 auxilioque iuuet fugiendaque Gorgonis ora  
 sustineat spoliumque sibi pestemque uidenti 360

355 poenas signata GL<sup>2</sup>M, poenam signati L.

357 was deleted as spurious by Bentley.

In 355 the reading of L, poenam signati, is clearly corrupt. That of GL<sup>2</sup>M, poenas signata seems also to be corrupt. As Housman remarks: "sine sensu signata in poenas Cassiepia dicitur, omninoque signata, non addito qua nota signetur; neque enim signata per se positum aut figurata aut conspicua facta significare potest. accedit quod postea uidebimus eiciendum esse u 357 et requiri quod accusatiuum Andromedam regat". Housman shows that 357 is spurious with the following arguments: "praeterquam quod multo aptius metuentem et ni seruet cohaerent hoc uersu omisso, et quod nimis incondite sine coniunctione tria coaceruantur participia relictam metuentem expositam, quae haec est oratio, succedit Deltoton Cepheusque et Cassiepia Andromedamque deflet?".

I believe that the meaning of poenas iuxtaque relictam/ Andromedan is "her punishment, consisting in the abandonment near her of Andromeda". Poenas depends on a verb lost in the textual corruption. Relictam Andromedan is in apposition to poenas (hence

it too is governed by this lost verb). Que means i.e. or namely, and introduces relictam Andromedan as an explanation of poenas. Manilius 2.28-9 (Persea...poena matrem...dolentem/soluentem) declares that Perseus, by freeing Andromeda, also freed her mother from her punishment.

What reading lies under the corrupt signata suas? Housman proposed four emendations of these words. Firstly, in his editio maior he conjectured clinata for signata. But the word clinata (found in Cicero's phaen 33:53, 86, 259) is an archaic formation most unlikely to have been used by Manilius. In his editio maior he also conjectured dignata for signata, taking in and dignata as two elements of the one word indignata, separated by tmesis. In his addenda he rightly abandoned this conjecture, because "Manilius uerborum tmesi abstinet" and because "indignor non ex in et dignor compositum sed ab indignus adiectiuo iam composito ductum est".

In his addenda (on the theory that L's poenam signati was the reading of the archetype, poenas signata a metrical and grammatical correction) he proposed to read: in poenam sinuans ulnas iuxtaque relictam/Andromedan (taking poenam as in apposition to Andromedan, not relictam Andromedan). But Andromeda was not Cassiepia's punishment. Cassiepia's punishment was relictam Andromedan "the abandonment of Andromeda". For the same reason Housman's proposal (put forward in the editio minor) to read resupina for signata (poenas again being in apposition to Androm-

edan) must also be rejected.

In his editio maior Housman also proposed retaining signata and reading per instead of in (i.e. reading per poenas signata suas iuxtaque relictam/Andromedan: "marked by her punishment, consisting in the abandonment near her of Andromeda"). But it is doubtful whether signari can be used of a metaphorical mark (in this case the mark consisting of the fact that Andromeda is placed in the sky near Cassiepia). In v.393 (caput per tria signatur lumina) which Housman quotes as parallel, the stars leave a visible, not metaphorical, mark on Orion.

I have two suggestions of my own to make. Perhaps we should read: in poenas generata suas iuxtaque relictam/Andromedan ("Cassiepia, from birth destined to be punished, this punishment consisting in the abandonment near her of Andromeda"). According to Manilius (5.540 : hanc quondam poenae dirorum culpa parentum/prodidit "the guilt of her hapless parents caused Andromeda to be exposed to punishment") fate had ordained that Cassiepia should sin against the gods and be punished by the chaining of her daughter to the rocks. This is clear from the word dirorum in 5.540, which means here "cursed by fate, doomed to be punished", as diri in Sen.Tro.66 fatalis Ide, iudicis diri domus. Manilius considers all wrong doers as from birth destined to do wrong and be punished. Because fata regunt orbem (4.14) nocentis/oderimus. ..in culpam poenasque creatos (4.115-6). In poenas generata suas is a parallel expression to in poenas creatos.

My second suggestion is that we should read per poenas stellata suas iuxtaque relictam/Andromedan ("Cassiepia, made one of the constellations because of her punishment, consisting in the abandonment near her of Andromeda"). That Cassiepia was made a constellation because of her punishment may be gathered from the scholia in Maas "Commentariorum in Aratum Reliquiae" p 372, 20-6, which describe Cassiepia's boast, resulting in the handing over of Andromeda to be devoured by the Sea Monster and how Perseus rescued Andromeda and conclude: Πάντες οὖν κατηστερίσθησαν ἀπλώσαντες τὰς χεῖρας ὡς περ ὑπόμνημα τοῦ πάθους φέροντες.

13

uix sole minor, nisi quod procul haerens

frigida caeruleo contorquet lumina uultu 409

Manilius is talking of the star Sirius. Haerens refers to the fixity of Sirius' position on the celestial sphere, as contrasted with the position of the sun, which moves among the constellations of the zodiac. Cicero uses haerens to refer to the fixity of the constellation Piscis Australis on the celestial sphere in Arat.33.169 <Piscis> procul illis Piscibus haerens.

The word contorquet in 409 seems strange. Some word such as demittit (cf.2.357 <linea trigoni> aera...infectum nostras demittit ad auras) or subducit (cf.5.209 Canicula subdente facem) would be more usual. The phrase contorquet fulmina is usual. Atlas Aquilo contorquet niues (Sen.Ag.479) is easily understand-

able when Seneca has just said of the winds: sua quisque mittit tela. However, phrases fairly similar to contorquet lumina are found with iaculari and iacto (cf. Cic. Arat. 33.331 et Gemini clarum iactantes lucibus ignem 33.458: et dextra radios laeto cum lumine iactans, Lucr. 5.576:  $\left\langle \text{luna} \right\rangle$  iactat de corpore lucem. cf also the other passages cited by Buescu on Cic. Arat. 24.2. In Q. Cicero (anth. lat. Ries. 642.11: pigra Sagittipotens iaculatur frigora terris), Sagittipotens makes the metaphor of the weapon clear. In Manil. 5.713f : et quos Delphinus iaculatur quattuor ignes/Del-tonque tribus facibus, ignes and facibus bring out the metaphor. If contorquet lumina is sound, the sense is "hurls his cold rays as a weapon". Manilius would thus be referring to Sirius when horrida frigore surgit (1.398).

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14

ipsius hinc mundo templum est, uictrixque solutis 420  
 Ara nitet sacris, uastos cum Terra Gigantas  
 in caelum furibunda tulit. tum di quoque magnos  
 quaesiuerunt deos; eguit Ioue Iuppiter ipse,  
 quod poterat non posse timens....  
 necdum hostem fieri sibi quemquam aut numina norat 430  
 siqua forent maiora suis. tunc Iuppiter Arae  
 sidera constituit, quae nunc quoque maxima fulget.

430. necdum hostem fieri Housman, necdum hostiferum O, nec di

mortiferum Goold (op.cit.p 106). aut was added by Jacob. norat Bentley, norant O.

"There is no word hostiferum, and this - coupled with the impermissible hiatus - lacates the source of corruption" Goold. Housman defends his conjecture hostem fieri in the addenda as follows: "non sane usitate diceretur fieri norat; sed supped- itatur uelut expertus erat, cuiusmodi est Cic.pro Marc.2 nec mihi persuadere poteram nec fas esse ducebam uersari me in nostro uetere curriculo". In other words, necdum hostem fieri sibi quemquam aut numina norat/siqua forent maiora suis should be translated:

"Juppiter had as yet no experience of an enemy coming against him and so did not know whether there were any powers greater than his own". Housman attacks Scaliger's conjecture pestiferum as follows: "pestiferum Scaliger, quod nimium est, nam ne gigantes quidem Ioui pestiferi fuerunt". Necdum pestiferum sibi quemquam...norat means "as yet Juppiter did not know anyone who could kill him". But Juppiter never knew anyone who could kill him, for no such person at any time existed. Hence, pestiferum nimium est.

Goold reads: nec di mortiferum sibi quemquam aut numina norant/si qua forent maiora suis (he reads the manuscript norant instead of Bentley's conjecture norat) and translates: "nor did the gods know whether anyone had the power to inflict death upon them or whether forces existed greater than their own". This translation makes good sense in the context, but it does not correctly translate the Latin. Nec di mortiferum sibi quemquam..

• norant cannot be the equivalent of nec di norant utrum mortifer sibi quisquam foret annon, as Coold takes it to be. It can only mean "nor did the gods know anyone who had the power to inflict death upon them". But this does not give a suitable sense. When the gods were about to face the giants and wanted to know whether the giants could kill them or not, they would not have asked themselves "Is there anyone we know who could kill us?", but "Does anyone exist, whether we know him or not, who could kill us? If not, then we are quite safe, because then even the giants could not kill us".

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15

tu modo corporeis similis ne quaere figuras,	458
... non poterit mundus sufferre incendia tanta,	461
omnia si plenis ardebunt sidera membris.	
quidquid subduxit flammis, natura pepercit	
subcubitura oneri, formas describere tantum	
contenta et stellis ostendere sidera certis.	465
linea designat species atque ignibus ignes	
coniungit; media extremis atque intima summis	
creduntur: satis est si se non omnia celant.	

464. describere Gain, disiungere O distinguere dett.

467 coniungit Gain, respondent O.

intima Garrod ( CQ 2, 1908, p 129), ultima O.

The word disiungere in 464 is corrupt. In 458-462

Manilius is apologizing for the fact that nature has made too few stars to form the constellations properly. He could not then proceed: "Nature is content merely to disjoin (disiungere) the constellations" (i.e. "nature is content merely to ensure that there are not so many stars that the constellations run into each other in a continuous blaze of light"). The sense required is given by formas describere tantum/contenta ("nature is content merely to outline the shapes of signs"). Manilius uses describere in a similar sense in 4.556 (moenia subcinctus curuo describet aratro). Nature is said formas describere just as she is said (in line 466) to have created a situation where linea designat species.

Goold (op.cit p 109) accepts the conjecture distinguere and translates formas distinguere tantum/contenta "She is satisfied with merely indicating the form of the constellations". But formas distinguere can here only mean the same as the reading formas disiungere, i.e. "disjoin the constellations". Goold refers to Manil.1.322 as containing an example of distinguere meaning "indicate". But there, the brightest star of the constellation of the Crown is said to "indicate its gleaming light by means of its burning flame" (candidaque ardenti distinguit lumina flamma) in the sense "show that it is different from that of the other, fainter stars of the Crown". The sense of disjoining, contained in the prefix dis, is thus retained.

In 467-8, ignibus ignes respondent (meaning "stars correspond to stars") is corrupt. As Housman remarks: "ignibus

ignes...respondent...reapse minime". This is clear from the following words media extremis atque intima summis/creduntur (i.e. the existence of parts of the constellations which lack stars has to be inferred from the existence of parts which do in fact contain stars). In place of respondent I have written, exempli gratia, coniungit. Gould retains respondent and claims ignibus ignes/respondent can mean "star is linked with star". He quotes as an example of respondere meaning "be linked with" 2.414. But there respondent means "are concordant with" (see Housman's note).

Shackleton Bailey (op.cit.81) conjectures se spondent for respondent. But this conjecture is not correct. He translates ignibus ignes/se spondent as "fires pledge themselves by fires", but it would rather mean "fires pledge themselves to fires" (i.e. are betrothed to fires). Even if ignibus could be taken as an ablative, not dative, it is strange to say: "non existent stars pledge that they exist because of the existence of real stars". Campbell (op.cit. p 186) conjectured et singula signis/respondent, which he translates: "Particular parts (i.e. groups of stars) do correspond...to the pictures". But this is wrong, because singula cannot mean "particular parts". et singula signis/respondent means "the parts, taken individually, do correspond", not, as Campbell is really interpreting the words, "some parts correspond and others do not".

I can see no sense in ultima in 467. Hence I have adopted Garrod's conjecture intima. I translate media extremis atque

intima summis/creduntur as "the parts in the middle of these lines are inferred to be there because of the parts at the ends (vertices) and the interior parts of the signs from the edges (the lines marking out the signs)". The extremis are the places where stars are situated. These stars are joined by lines (linea designat species atque ignibus ignes/coniungit). We infer that the middle parts of these lines (media) exist because stars do exist at the ends. Now that we have inferred that the lines outlining the signs exist (the summis), we infer that the parts of the signs inside these lines (intima) also exist.

Garrod's interpretation of intima summis creduntur is:

"We infer...the interior parts from the surface", Gould's of ultima summis/creduntur is "the rear parts are to be inferred from the front". Neither of these interpretations gives an appropriate sense. Throughout, Manilius is concerned with two dimensions. He is not attempting to explain why we do not see the inwards of a constellation or its back at the same time as its front, because that would be impossible in viewing any object.

16

ut freta canescunt sulcum ducente carina,	708
accipiuntque uiam fluctus spumantibus undis	
quam tortus uerso mouit de gurgite uertex,	710
candidus in nigro lucet sic limes Olympo.	

Lines 708-10 are difficult to interpret. Their interpretation is,

I believe, this: There is one simile in 708-10, that involving a wake formed by a ship travelling across the waves. As one looks back from the stern of the ship, one sees the wake being formed on the wave the ship is just passing. The wake (sulcum) thus appears to travel just behind the ship and across the waves. At one time the part of the wake which is just forming is on the crest of a wave. At that time accipiunt uiam (the wake) fluctus spumantibus undis. A little later, the part of the wake which is just forming lies in the trough between two waves. The tortus... uertex (a disturbed mass of water - i.e. the wake) appears to have moved uiam (also the wake) down from the disturbed wave crest (uerso de gurgite) into the trough. I have collected further examples of passages in Manilius where the subject and object of a verb have the same meaning in my note on 1.213.

17

inquiruntque sacras humano pectore causas:	717
num se diductis conetur soluere moles	
segminibus, rara pateant compagine rimae	
admittantque nouum laxato tegmine lumen;	720
... an coeat mundus, duplicisque extrema cauernae	723
conueniant caelique oras et sidera iungant,	
perque ipsos fiat nexus manifesta cicatrix	725
fusuram faciens mundi, stellatus an orbis	
aeriam in nebulam densa compagine uersa	
in cuneos alti cogat fundamina caeli.	

719 segminibus Scaliger, seminibus O.

719 pateant Gain, que labent O.

726 stellatus Gain, stipatus O. an Housman, et O.

727 densa Goold, clara O. uersa Housman, uersus O.

Scaliger's conjecture segminibus in 719 is required to have the meaning "hemispheres" or "two halves of the one body". It does not have this sense in any other extant Latin text. However, segmenta does have the sense "halves of the one body" in Aus. Mos.118 sq solido  $\left\langle \text{percae} \right\rangle$  in corpore partes/segmentis coeunt sed dissociantur aristis, which Housman quotes (without comment) in his addenda. Evelyn White (the Loeb editor) translates the words: "in thy plump body, the parts meet as segments, but are kept apart by the backbone". A perch's body divides evenly into two segments (segmentis) which are separated by the backbone and associated bones which run down the middle of the fish.

I think labent in 719 is corrupt. Rima is a void where no material exists. It is not something concrete, hence it cannot fail (labent). Hence I conjecture pateant for que labent. Housman quotes Verg.Aen.2.463 labantes iuncturas to illustrate rimaeque labent. But Vergil's expression is not parallel. A join can fail, a crack cannot. The difference between the use of the words patere and labare in this connection is well brought out by Ou.met.11. 514-5: iamque labant cunei, spoliataque tegmine cerae/rima patet.

Qui deinde sequitur (after fusuram faciens in 726) uer-

borum str<sup>e</sup>pitus captum meum superat". Housman. Housman continues "siue...orbis pro circulo positum est, quae haec est oratio ac sententia "circulus stipatus (quanam re?) in nebulam uersus fundamina caeli condensat"? siue pro caelo, quae haec, "caelum stipatum in nebulam uersum condensat caeli fundamina"?".

I have given above what I believe Manilius wrote from mundi in 726 to the end of 728, and I translate what follows mundi as follows: "or else the star studded layer is turning the foundations of high heaven into an aerial cloud with dense structure and cramming them into a narrow space".

The theory about the milky way given here, has the following as its basis: the inside surface of the sphere of the stars, the surface which faces the earth, was formerly covered with a layer called alti fundamina caeli. This layer began to peel off and a new layer became attached to the inside surface of the sphere of the stars in its place. This layer spread over more and more of the surface, and now the former layer only adheres to the surface of the sphere of the stars in a narrow band, on top of which all the rest of the old layer has been crammed tightly packed, forming the milky way.

This new layer is called the stellatus orbis - the layer which has the stars embedded on it. Elsewhere the sky is said to have the stars embedded on it (caelum stellis ardentibus aptum, Ennius trag. frag. 1 ed. Jocelyn, Verg. Aen. 11. 202).

Now this theory is incompatible with the theory expounded in 723 - fusuram faciens mundi (726), for the former

theory holds that the sphere of the heavens was formerly cracked, and this crack is now being soldered (fusuram faciens). The milky way is the place where the soldering is being effected. Thus an is required in 726, not et.

Housman says that the expression clara compagine in 727 "uix latine uidetur". What is required instead of clara is a word meaning "dense". Bentley conjectured crassa. Housman remarks: "crassa Bentleius, pro quo dicendum fuisse opinor arta". This remark means, I believe, "If one wants a phrase meaning "dense structure" the expression to use is arta compago, not crassa compago, for Latin writers would not use crassus with compago". I can find no example of the use of crassus with compago/compages; I have observed the following uses of artus: Verg.Aen.1.293f compagibus artis/claudentur Belli portae, Stat.Theb.7.43-4 ferrea compago laterum, ferro arta teruntur/limina Theb 3.356 artam compagibus urbem, Aus.417.30 artus compago, Drac.de.laud.dei 2.645 compagibus artis. But, as Housman of course realized (Goold, op. cit.p 111 - "Housman has unfortunately gone right off the rails here" - seems to think he did not) arta could not have been written by Manilius after nebulam, for then the line would not scan. Another word meaning "dense" must be found to replace clara. I believe Goold's conjecture densa is correct. I can find no example of densa compago/compages. However, Pliny (n.h.17, 118 and 36, 1) uses compage densata. Densus is used with cunei (cf. cuneos in line 721) in Verg.Aen.12.575 dant cuneum, densaque ad muros

mole feruntur and Aen.12.457 densi cuneis se quisque coactis/agglomerant. These two references are given by Bentley.

It is the alti fundamina caeli (the first layer) not the stellatus orbis, which is turned into an aerial cloud with a dense structure, hence uersa (acc.pl), not uersus, should be read in 727.

Housman rightly abandoned in his edition the reconstruction he suggested in 1898: mundi stipator an orbis/aeriam in nebulam lacxa compagine uersa/in cuneos alti fundamina caeli." or the compressor of the sky is cramming the foundations of high heaven, turned into an aerial cloud with rarefied structure, into a narrow space". I have adopted Housman's conjecture an for et in 726 and uersa for uersus in 727, but reject stipator in 726 (for stipator elsewhere means "henchman", "one of the men crowding about a leader", not "one who compresses something", and the whole sphere of the sky is not compressed, only the milky way) and lacxa for clara in 727 (for the picture of the foundations of heaven being rarefied, then condensed, makes no sense to me).

18

diuersos quoque per facies accensa feruntur  
lumina, quae †subitis existunt nata tenebris. 834

"Subitae tenebrae sunt quae subito fiunt...non ex quibus subito existunt lumina...Aut igitur pro existunt requiri uidetur pereundi notio aut pro subitis reponendum esse furuis". Housman. Thus, if

subitis is retained, instead of existunt nata something like fug-  
iunt extincta should be read. Then subitis...tenebris would mean,  
as it ought to, "tenebris quae subito fiunt".

Another course of emendation is to replace subitis with  
another word. Housman's furuis is possible. Another possibility  
is fuscis. (cf. Verg.Aen.8.369: nox ruit et fuscis tellurem amplex-  
titur alis). Yet another is spissis (cf.Verg.Aen.2.621: spissis  
noctis se condidit umbris, Petr.sat.114.3 spissae tenebrae, Sen.  
Thy.993-4 spissior densis coit/caligine tenebris, Sen.Herc.f.710:  
spissa caligo, Prud.Peri.10.373 o spissus error, o tenebrosum  
genus and Ou.Met.7.528 principio caelum spissa caligine terras/  
pressit). The word may be too strong. Another conjecture, ruptis,  
is proposed by Shackleton Bailey (op.cit.p 86). But the passages  
Shackleton Bailey quotes in defence of his conjecture (Stat.Theb.  
8.35, 1.353-4, Luc.1.153) do not exhibit the same use of rumpere.  
Rupit tenebras is used in Stat. Theb.8.35 because subitus uates  
pallentibus incidit umbris (8.1) - cf. also impegit in 8.34. Stat.  
Theb.1.353-4 and Luc.1.153 describe a flash of lightning bursting  
the sky in two (cf. Housman's note on the Lucan passage and Manil.  
1.864 caelum fulmine ruptum). Shackleton Bailey would have done  
better to quote anth.lat.Ries, 389.9 sol rumpit tenebras and Prud.  
cath.1.43 rupto tenebrarum situ. Sectis (cf. Claud.44.19-20  
cristatus apex tenebras...serena/luce secat) and pulsis (cf.Manil.  
1.127 fugit in infernas caligo pulsa tenebras and Ou.met 7.703  
uidet pulsis Aurora tenebris) are also possible conjectures in



pipes in sheep pens but in the siluae (nec siluis siluestre canit), the "wooded pasture lands". Aula and silua are by no means synonymous, as can be seen from Hor.Epl.1.2.65-7: uenaticus, ex quo/tem-pore ceruinam pellem latrauit in aula/militat in siluis catulus. Here "he brings his Muse into sheep pens" gives such an extraordinary sense that one would have to force oneself not to interpret Musamque inducit in aulas as "brings his Muse into the courts of kings", which, in itself, gives good sense. Royal courts (aulae) are however, just the opposite of siluae, as can be seen from Oudemet.11.764-6: oderat hic urbes, nitidaque remotus ab aula/secretos montes et inambitiosa colebat/rura (hic refers to Aesacus, son of Priam).

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20

sed sterilis Virgo est, simili coniuncta Leoni	238
[nec capit aut captos ecfundit Aquarius ortus]	239
parque est Vrna nitens fundentis semper Aquari	232.

I have deleted 239 as spurious and have transposed 232 to come before 240.

232 parque est Vrna Gain, parsque marina O Jacob had already written urna, in his conjecture pars maris urna.

The meaning of 239 is correctly given by Housman: "et Aquarius ortus (id est partus, ut IV 206, 668, V 46) aut non concipit aut, si quos tamen concepit, effundit urna sua, ut fiat abortio". Thus Aquarius is regarded in this verse not merely as

a catamite, one who plays the woman in homosexual relations, but also as able to abort, and hence able to conceive. But how could a male, even if he is a catamite, conceive? Such rubbish was not written by Manilius. It is clear from another consideration that Manilius did not write this line. In 2.566 he writes of Aquarius as a possessor of uirtus, as a warrior vanquishing his foes (turba sub unius iuuenis uirtute ferarum). Would Manilius then have talked of Aquarius as a catamite? Does a catamite possess uirtus?

I believe 239 was interpolated to supply a mention of Aquarius among the other eleven signs, which are described as fertile, sterile or in between (in verses 236-243). Aquarius was lost from the list when 232 was transposed. Perhaps 232 was omitted from its place before 240 and placed in the bottom margin, with a note to place it before the verse ending with mixtum (240). Instead, it was placed before the verse ending with mixta (233).

My reading requires Vrna nitens fundentis semper Aquari to be simply a poetic expression meaning Aquarius qui undas ex urna nitenti semper fundit. Similar elaborate poetic expressions are found in 3.304-5: Phrixei uellera signi, where a simple Aries would have been sufficient and Chelarumque Fides iustaeque examina Librae, where a simple Libra would have been sufficient. Manilius used Vrna as the equivalent of Aquarius in 2.561 (nati.. et Virgine et Vrna). Vrna is also used as an equivalent of Aquarius in Luc.9.537 and anth.Lat.Ries.618.

---

sed si quis contentus erit numerasse quadrata      297  
 diuisum ut signis mundum putet esse quaternis,  
 aut tribus ac binis signis ornare trigonum,  
 ut socias uires et amicos exigat ortus      300  
 foederaque inueniat mundi cognata per astra,  
 falsus erit. nam, quina licet sint undique signa,  
 qui tamen e trinis, quae sexto quoque feruntur  
 astra loco, fuerint nati, sentire trigoni  
 non poterunt uires: licet illud nomine seruent,      305  
 amisere loco dotes numerisque repugnant.

303 sexto Gain, quinto O.

"Anyone who thinks it is all right to calculate the squares on the  
 supposition that the zodiacal circle is inscribed with lines each  
 four signs long or who draws up a triangle formed with sides each  
 five signs long and who hopes in this way to discover the effects  
 of signs upon each other and the relationships between men born  
 under different signs and their alliances through signs related  
 to each other in the heavens, will be deceived. For although  
 there are five signs on each side of a triangle whose sides have  
 the correct length all the same, those who are born under one or  
 other of the three signs which are situated in every fifth place  
 on the zodiacal circle, will not be able to feel the effects of a  
 triangle and, although these signs are said to form a triangle,  
 because of their position they do not feel the influence of one,

nor do they have lines of the correct length to form one".

Those whose error Manilius is attacking count all the signs from one vertex of a triangle to another and, finding that there are five (by the inclusive method of reckoning) wrongly imagine that the side of an inscribed triangle is therefore five signs long and hence the vertices fall at every fifth (sexto quoque) sign.

The manuscript reading quinto is corrupt. Quinto quoque loco involves the inclusive method of reckoning, i.e. means "in every fourth place". In the other passages of Manilius where quisque with an ordinal occurs (2.353, 398, 572, 576, 654, 661) the inclusive method of reckoning is used. C.L. Howard, in "Quisque with ordinals" (CQ n.s. 8 (1958) p 1ff) reaches the conclusion, after considering many passages, including those in Manilius, that "there is a fairly strong presumption that any instance of quisque with tertius, quartus, quintus involves the inclusive method of reckoning, and the earlier the date of the quotation, the stronger the presumption is". In Manilius septima quaeque (2.398) also involves the inclusive method of reckoning. Quinto quoque loco must mean then "in every fourth place". But it is nonsense to say that signs in every fourth place do not feel the effects of a triangle, for these are the very signs which the vertices of an equilateral triangle inscribed in the zodiacal circle strike. Housman (in the last part of his note on 303) explains quinto quoque as follows: "trigoni latus a prima parte

Arietis initium capiens in ultima Cancri parte terminatur, ut Leo totus in altero sit latere, item totus in tertio Sagittarius; quo pacto haec tria signa mutuo trigoni affectu non coniunguntur".

But this, (as Shackleton Bailey, op.cit. p 82 has stated before me) is false. In reality, if one vertex of an equilateral triangle inscribed in the zodiacal circle lies on the first degree of Aries, the next will lie on the first degree of Leo, not the last of Cancer and the third on the first degree of Sagittarius, not the last of Scorpio. Whatever degree of a sign one vertex of a triangle is reckoned as falling on, the next vertex must inevitably fall on the same degree of the sign in the fourth place from that sign. Thus quinto gives an entirely false sense (even Housman admits it is partly false.),

The sense required, "every fifth place", is achieved by emending quinto to sexto. The corruption occurred when the numbers were written in symbols.  $ui^o$  (sexto) was corrupted to  $u^o$  (quinto). The same corruption occurred in 5.716, where  $ui^{um}$  (sextum) has been corrupted to  $u^{um}$  (quintum) in all the manuscripts. Examples of numbers written as symbols are still found in L (Housman in his note on 2.935b gives 15 examples). Another example of corruption of numbers is afforded by the readings at 4.489.  $ML^2$  read the correct septima ( $uii^o$ ), GL offer sexta ( $ui^o$ ). I give a fuller list of such corruptions in my note on 2.521.

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haec eadem species fallet per signa quadrata 320  
 quod, cum totius numeri, qui construit orbem,  
 ter denae quadrum partes per sidera reddant,  
 euenit ut, prima signi de parte prioris  
 si partem ad summam ducatur uirga sequentis,  
 bis sexagenas faciat; sin summa prioris 325  
 et pars confertur subiuncti prima, duorum  
 signorum in medio numerum transique referque,  
 triginta duplicat partes, pars tertia deerit  
 et quamuis quartum a quarto quis computet astrum,  
 naufragium facient partes unius in ipsis, 330  
 quae quamquam in partis diuisi quattuor orbis 684  
 sidera quadrata efficiunt, non lege quadrati 685  
 censentur: minor est numeri quam cardinis usus. 686

684-6 were transposed to follow 330 by Housman.

"The same false appearance will deceive you in the quadrangular  
 signs too. Of the total number of degrees which comprises a  
 circle, each sign contributes thirty to form a square inscribed in  
 the zodiacal circle. Hence, if a line is drawn from the first  
 part of a preceding sign to the last part of a following sign  $\left\langle \begin{array}{l} \text{of} \\ \text{the same square} \end{array} \right\rangle$ , it will cut off an arc of one hundred and twenty  
 degrees. If, on the other hand, the last part of a preceding sign  
 is joined to the first part of a following and you measure and  
 calculate the number of degrees the two signs in the middle con-

tain, you will find it is only sixty, too few by a third, and, although you are calculating the distance of a sign to another three signs away, the number of degrees in one sign will be missing from the required number. Although the number of degrees is sufficient to divide the zodiac into four parts and make the signs signs of the same square, it is not sufficient to satisfy the law governing the construction of squares; the number of degrees in the sides is fewer than the correct position of the vertices requires".

In the second false construction mentioned (that described in sin summa prioris (325) to the end of 686), four lines each two signs long and cutting off an arc of  $60^{\circ}$ , are drawn in the zodiacal circle. Although the ends of these lines strike the same signs, they strike opposite ends of them and hence do not meet. They are thus too short to form an inscribed square. As stated in line 330, the number of degrees in one sign - i.e.  $30^{\circ}$ , will be missing from the required number, for the lines two signs long only cut off arcs of  $60^{\circ}$ , not  $90^{\circ}$ , as a line must if it is to form a side of an inscribed square. Naufragium facient, "will suffer shipwreck", is equivalent to "will be missing".

23

sed longe maior uis est per signa trigoni	352
quam quibus est titulus sub quarto quoque quadratis.	
altior est horum submoto linea templo,	
illa magis uicina meat caeloque recedit	355

et propius terras accedit uisus eorum

aeraque effectum nostras demittit ad auras.

357 effectum Gain, ineffectum LM, infectum GL<sup>2</sup>

I translate lines 356-7: "The line of sight  $\left\langle \begin{array}{l} \text{from one sign of a} \\ \text{triangle to another} \end{array} \right\rangle$  travels closer to the earth and sends down the aer it has formed to our atmosphere".

Aer is here used in the sense "an influence of the signs on the fate of men" as in 4.482-3:  $\left\langle \text{partibus Sagittari} \right\rangle$  sex bisue peractis/octo, bis aut denis, metuendus dicitur aer, 4.498-9: hae partes sterilem ducunt et frigore et igni/aera uel sicco uel quod superauerit umor and 4.742-3: astra/perfundunt...suo subiectas aere gentes (aere Bentley, aequore O). The exact nature of this aer is nowhere defined.

The reading of GL<sup>2</sup>, infectum, has been accepted in all the editions I have seen. I think it is, however, simply a medieval metrical correction (of which GL<sup>2</sup> have many) of the ineffectum of the archetype. To illustrate infectum Housman adduces 2.856ff: omne...signum...partibus inficitur mundi, "every sign is influenced by the divisions of the heavens". But "the line of sight sends down...influenced aer" makes no sense to me. Influenced by what? By itself aera infectum means something like "tainted air" (cf. Plin. n.h. 9.18, : odorem...non aliud quam infectum aera esse, Luc.7.768-70: terramque nocentem/inspirasse animas, infectumque aera totum/manibus). "Tainted air" makes no sense in this passage of Manilius.

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quin aduersa meant alterna trigona trigonis, 520  
 tertiaque in bellum diuerso limite ducit  
 linea.

521 tertia Gain, altera O.

"Alternate triangles are opposed to each other and alternate perimetres lead their triangles into war, since their paths move in opposite directions".

Four triangles can be inscribed in the zodiacal circle; the vertices of triangle 1 lie on Aries, Leo, Sagittarius, those of No. 2 on Taurus, Virgo, Capricornus, of 3 on Gemini, Libra, Aquarius, of 4 on Cancer, Scorpio, Pisces. Manilius is here stating that the signs of alternate triangles are opposed to each other (i.e. those of 1 are opposed to those of 3, those of 2 to those of 4). Linea in 522 means "the perimetre of a cyclic figure" (in this case an inscribed triangle), as it does everywhere else it occurs in Book 2, (in lines 274, 311, 338, 347, 354, 360, 375, 645 and 673) and in 4.333. Tertia means "alternate", as it does in 2.374 (tertia conuexo conduntur signa recessu). The paths of alternate triangles move in opposite directions. Thus, one side of triangle 1 joins Aries to Leo. The side opposite it belongs to the alternate triangle 3 and joins Libra to Aquarius. The first line travels from the right hand side to the left hand side of the zodiac, the other from left to right. All the other sets of opposite lines similarly belong to alternate triangles and

travel in opposite directions.

Housman retains altera in 521 and interprets it: "altera ex duabus, quae in quattuor trigonis momentum faciunt, lineis diametris, ea uidelicet quae Arietem Libramque, non quae Cancrum et Capricornum coniungit. secundum et quartum trigonum inter se non esse inimica etiam ex uu. 541-569 colligitur". But one would never guess linea could mean this unless Housman had expounded it. Moreover, the sense Housman's interpretation gives 521 (triangles 1 and 3 are opposed, 2 and 4 are not) contradicts other verses in the poem. For 520 states that alternate triangles are opposed to each other (i.e. 1 is opposed to 3, 2 to 4), not "Triangles 1 and 3 are opposed, 2 and 4 are not". Verses 541-569 do not support Housman's interpretation. In 523 Manilius goes on to talk of triangles 1 and 3, but only as examples of the rule (namque, which introduces 523, here meaning "for example"). Manilius states that triangles 1 and 3 are opposed for two reasons, quod tria signa tribus signis contraria fulgent (527) and quod... aeterna manent hominum bella atque ferarum. The first reason applies equally well to triangles 2 and 4 and in 577-8 (ne sit mirandum si foedus non datur astris/quae sunt aduersis signis cognata trigona) it is applied to all triangles (i.e. not merely 1 and 3, but 2 and 4 as well). In 539-40 we learn that this rule of enmity is not absolute. Hence that Cancer does not attack Capricorn (it does according to 417) and Capricorn neither attacks nor is attacked by Scorpio or Pisces, must be attributed to free

will, not to the fact that triangles 2 and 4 are not included in the rule of enmity. That 2 and 4 are opposed to each other is tacitly admitted by Housman on page xx of his introduction, where he includes the signs of the 2nd and 4th triangle in his (a) classification: "A sign is attacked by the opposite sign and by the two other members of that opposite sign's trigon".

Tertia could have been changed to altera via alterna, a repetition of alterna in the previous line, or the change could have been made from iii<sup>a</sup> (tertia) being miscopied as ii<sup>a</sup> (altera). There are several mistakes in the text of Manilius which have arisen from numbers being written in symbols: in 5.716 sextum has become quintum, in 2.313 ternis (restored by Bentley) is represented by a in the manuscripts, in 3.285 quinta has become quarta and in 3.457 senis has become ternis.

25

	quae super exortum est a summo tertia caelo,	864
	infelix regio, rebusque inimica futuris	
	et uitio fecunda nimis; nec sola, sed illi	
	per erit, aduerso quae fulget sidere sedes	867
868a	iuncta sub occasu/, qua tanta pericula mortis;	902A
	utraque praetenta fertur deiecta ruina.	869
	porta laboris erit: scandendum est atque cadendum.	
	nec melior super occasus contraque sub ortu	
	sors agitur mundi: praeceps haec, illa supina	

pendens aut metuit uicino cardine finem

aut fraudata cadet.

874

The whole of line 868: iuncta sub occasu. neu praestet cardine mundi was deleted by Bentley. I have deleted the second half: neu praestet cardine mundi, transposing to come in its place verse 902A (a hemistich) which I have written qua tanta pericula mortis. M reads per tanta pericula mortis. The verse is not present in G or L. L leaves a space of one line between 902 and 903. In G the first letter of 903 is larger than usual.

I subjoin a translation of lines 864-874:

"The region above the horoscope, the second from the zenith, is unpropitious, adverse to future prosperity and extremely fertile in harm. It is not the only one. There is another like it, which shines opposite it and just under the western horizon, {where the danger of death is so great.} Both regions are dejected in their travels, being threatened with a fall at any moment. They are the gates of toil. From one the constellations must rise, from the other fall. The lot of the sky in the region above the western horizon is no better. One region is hanging face down, the other is on its back; one fears death in the neighbouring cardinal region, the other will fall if deprived of support".

I have transposed line 902A to form the second half of line 868. Qua tanta pericula mortis is an appropriate description of the occasus, the region containing the western horizon, for the occasus nigri...Ditis ianua fertur/et finem uitae retinet.../

hic etiam ipse dies moritur (951-3). It is also an appropriate detail to add here, for it helps explain why the region just below the occasus is so harmful. The occasus, being the region of death, has, as we shall see, harmful effects on the region above as well as that below it.

Qua tanta pericula mortis thus forms an appropriate ending to verse 868. What the manuscripts present in the second half of 868: neu praestet cardine mundi is not appropriate, for it must be construed with 869. Neu praestet, cardine mundi/utraqe praetenta fertur deiecta ruina means "So that you will not think this region any better, both regions are carried downwards from a pivot of the sky and are threatened by a fall at any moment". But the region quae super exortum est (864) is above, not below the pivot it is next to - the horoscope. This is not the only fault in neu praestet cardine mundi, for neu praestet is an odd thing to say in this sentence and mundi in cardine mundi is metrical fillup (perhaps cardine mundi is an interpolator's inept imitation of the clausula cardine mundi in 1.605, where mundi is appropriate).

The correct explanation of praeceps haec (872) - 874 is given by Huet (on pages 29-30 of his appendix to Fayus' edition). "Haec (the region super occasus (871) ) metuit finem, cum instet occasus in uicino cardine" - for, the occasus, as Manilius tells us in 952, finem uitae retinet - "haec (the region sub ortu (871)) cadit ab horoscopo, cui subiacet" (except that Huet substitutes his false conjecture cadit for the correct cadet of GL).

Shackleton Bailey (op.cit. p 83) rightly remarks of Housman's explanation of 872b-874a: ("utriusque duplex obuersatur periculum, aut enim tacto,  $\omega$  επιφέρεται, uicino cardine finem habebit et esse desinit, aut, si forte eum non tetigerit, expectato fulcro fraudata cadet neque ubi consistat inueniet. nugae nugatorie exornat") that "nugae nugatorie exornat is too mild a comment on such rubbish, from which Manilius should be wholly exonerated". Why should the region below the horoscope fear its end in the horoscope? Why if it falls will it fall upwards into the horoscope and not downwards to the imum caelum?

Shackleton Bailey conjectures iacet instead of cadet. But the manuscript text makes sense as it stands. His emendation is thus unnecessary.

### BOOK 3

#### 26

Fortunae conquire locum per sidera cuncta,           171  
 quae primum pars est numerosis dicta sub athlis.  
 qui tibi cum fuerit certa ratione repertus...

172 was deleted by Bentley. pars est numerosis GL, pars est munerosis M, est aerumnosis pars Housman.

The locus Fortunae is the first of the twelve divisions of the circle of athla. Bentley declared verse 172 ~~is~~ spurious, because the athla are called numerosis, although there are only

12 (numerosis, quae tantum XII sunt?). Housman acknowledges that if numerosis is the original, the verse is spurious. He believes however that the verse is genuine and Manilius wrote quae primum est aerumnosis pars dicta sub athlis ("which is the first part I have mentioned under the athla, whose Latin name is aerumnae"). Aerumnosis would thus be used to explain the meaning of the Greek word athla and show the connection of these athla with the labours of Hercules, for which the usual Latin word is aerumnae (Varro uses the Greek athla in referring to them). It is true Manilius sometimes explains Greek words (as, for example Heniochus and Bootes in 5.20: Heniochusque memor currus plaustrique Bootes) but aerumnosis elsewhere means "wretched". Housman's conjecture gives it a unique sense. Thus I believe it is more probable that Bentley was correct in deleting the line.

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27

nam quisquis spectat ab axe  
 dimidium ex toto mundi uidet orbe rotundi,      375  
 pars latet inferior; neque enim circumuenit illum  
 recta acies, media terrae distinguitur aluo.  
 effugit ergo oculos summo spectantis ab orbe  
 dum sex submersis uectatur Phoebus in astris.      379  
 ... hic locus in binas annum noctesque diesque      383  
 per duo partitae dirimit diuortia terrae.

377 terrae Gain, que tenus O.

"A man looking from the pole sees only half the sky; the lower half is hidden, because his line of sight, being straight, cannot travel around the sky. The sky is divided  $\langle$  into two hemispheres, one visible, one invisible  $\rangle$  by the paunch in the middle of the earth. Hence when the sun is south of the equator it cannot be seen by an observer at the north pole...For observers at the poles, the year is divided into two pairs of nights and days, each pair occurring in one of the hemispheres formed by the division of the earth".

Tenus in 377 is corrupt. The sky is not divided media aluo (as far as the earth's equatorial belt and no further), but media terrae aluo (by the bulge in the middle of the earth). This bulge divides the sky into two portions, one entirely visible to an observer at the pole, one entirely invisible. The signs in the southern portion are entirely invisible, for they are medio terrae celata tumore (3.353). Manilius also talks of the earth's equatorial bulge in 1.220 (mediaque tumore/eripiunt terrae caelum) and 1.233 (orbem/uentris  $\langle$  terrae  $\rangle$ ).

---

28

Quae cum ter centum atque quater uicenaque constant 419

419 atque Housman quater Jacob, numeris GL<sup>2</sup>, numerus LM

Manilius is talking of the half degrees of the equator, of which there are 720, a number Jacob recovered with his conjecture et quater. Since this does not scan, Housman writes atque

quater, which is probably what Manilius wrote. Shackleton Bailey (op.cit.p 83) objects to the conjecture atque quater that "it is not the practice of classical poets to place atque before q". He remarks in a footnote that "Lucretius has atque quietem (3.910) and Sidonius, in hendecasyllabics, atque quartus (23.380). There are two dubious instances in Plautus, Merc.742, Pseud.727". But the explanation of the great rarity of atque before q in poetry is not necessarily that poets especially avoided it. Atque normally goes before a vowel. Unelided atque is almost entirely avoided in the elegiac poets. Virgil has 294 examples of elided atque, only 35 of unelided, Manilius 108 of elided, 17 of unelided. Hence there was little opportunity to use atque before q in hexameter poetry, considering how few words there are which are iambs or start with an iambus which have q as their initial letter. Shackleton Bailey continues in his footnote: "In prose the phenomenon is rare, but not, as Lewis and Short assert, unknown". Lewis and Short do not assert that there are no instances of atque before q in prose, only that there are no instances in Cic.Imp.Pomp., Phil. 2, Tusc 1 and Off 1, Caes.B.G.1 & 2, Sall.Cat and Livy 21. Shackleton Bailey then gives all the examples he has found of atque before q in prose. Note that a poet writing in hexameters could have used none of the words he cites (querimoniam, qui, quaeso, quaestum, quinguagies, quadripedes) with the exception of quot and quod, for they would not scan if placed immediately after atque. To prove that poets avoid q after atque Shackleton Bailey would

have to prove that poets specially avoid collocations of q sounds. But Manilius does not avoid such collocations, on the contrary he deliberately pursues them for alliterative effect, as in 2.353 quam quibus est titulus sub quarto quoque quadratis (cf also 1.57 quantaque quam and 2.337 quiscumque quater).

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29

idcirco tanta est rerum discordia in aevo                    525  
 et subtexta malis bona sunt lacrimaeque sequuntur  
 uota, quod in nullos seruat fortuna tenorem;  
 usque adeo permixta fluit nec permanet usquam,  
 amisitque fidem uariando cuncta per omnis.                529  
 non annis anni nec menses mensibus usquam/conueniunt.

527 quod in nullos Gain, nec in cunctos O.

Manilius says in 528  $\langle$  fortuna  $\rangle$  nec permanet usquam and in 529 amisitque fidem uariando cuncta per omnis. The manuscript reading in 527 nec in cunctos seruat fortuna tenorem ("Fortune does not stay the same for all" - i.e. Fortune stays the same for some, but not for others) contradicts these statements. Hence I have written quod in nullos instead of nec in cunctos. Idcirco in line 525 is best left untranslated. It anticipates the quod of 527 (idcirco similarly anticipates quod in 2.178, 471, 530 and 3.553).

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BOOK 430

quid referam.....	37
speratum Hannibalem nostris cecidisse catenis,	41
exilium { passum, Romanae caedis aceruos	
congestos } que rogos furtiua morte luisse?	42

I have marked a lacuna between exilium and que in verse 42, a lacuna in which some words such as passum, Romanae caedis aceruos/ congestos fell out.

42 rogos Gain, rogi M, regi L, rei GV.

"Why should I tell how Hannibal, whom we had hoped would die laden with our chains, instead suffered exile and atoned for the heaps of Romans he slew and caused to be placed on funeral pyres by a secret and shameful death?".

The reading of none of the manuscripts in the first half of 42 makes sense. One cannot atone for exile. Many conjectures have been proposed, most impossible grammatically. Housman's exitium patriae (editio maior) and exitium generis (editio minor) are not, but they are wrong because Manilius is never concerned with the welfare of Carthage, but always with that of Rome. Besides, the context demands that it is injuries done to Rome that Hannibal is to atone for. The one conjecture of merit is Barth's auxilium regis. It gives the sense that Hannibal atoned by death for the help he gave King Prusias of Bithynia (being his admiral

in a war against Rome). But the Romans wished to kill Hannibal because of the great injuries he inflicted on them in the second punic war, long before his command of an unsuccessful naval expedition against them. Manilius also mentions the funeral pyres which Hannibal caused to be lit to burn the Romans slain by him in 4.660: <Hannibal> fecit et aeternum Trebiam Cannasque sepulcris/obruit.

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31

furit alter amore 79

et pontum transnare potest et uertere Troiam,  
alterius frons est scribendis legibus apta.

"Pontum transnare, ut Leander, uertere Troiam, ut Paris" Housman. Breiter takes both pontum transnare and uertere Troiam as referring to Menelaus: "Der eine wird ein zweiter Menelaus". Housman's interpretation is superior, because: (1) Leander and Paris were far more famous as lovers than Menelaus was. (2) Transnare is used of Leander in OU.A.A. 2.249-50: saepe tua poterat, Leandre, carere puella;/tranabas, animum nosset ut illa tuum, Am.2,16, 31-2: saepe petens Heron iuuenis transnauerat undas;/tum quoque transnasset, sed uia caeca fuit and Hor.C.3.3.18-21: Ilion/fatalis incestusque iudex/et mulier peregrina uertit/in puluerem uses uertere of Paris.

If Breiter's interpretation were accepted, transnare

would mean "cross the sea in his fleet". Manilius uses transnare in this sense (with classibus) in 5.43-4: Totumque uolet transnare profundum/classibus.

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32

at quibus Erigone dixit nascentibus aeuum,  
 apta magisterio ludoque exercita Virgo, 190  
 ad studium ducet mores et pectora doctis  
 artibus instituet...  
 in uitio bona sunt: teneros pudor impedit annos, 200  
 magnaue naturae cohibendo munera frenat.  
 nec fecundus erit (quid mirum in uirgine?) partus.

190 apta Bentley, opta M, ora GLV.

ludoque exercita Gain, nudosque coercita O.

"Erigone, a Maiden good at teaching and trained by schooling, will make those whose life she determines when they are born of a studious nature and will form their minds with the learned arts ... But the good qualities of her offspring are vitiated. Bashfulness impedes him when he is young and restrains and keeps in check his great natural talents. Nor will her offspring be fertile (no wonder when she is a virgin)".

In line 190 opta and nudos are plainly corrupt. Ora and coercita are also corrupt. Scaliger attempted to retain ora and coercita by emending nudos to nodo. He took magisterio nodoque as a hendiadys for magisterii nodo. With his conjecture, the

line means "a Maiden with her mouth bridled by the knot of a teacher". Bentley rightly rejects this and shows that ora is corrupt with these arguments: "Cur ora Virgini coercentur quae ipsa decus linguae faciet regnumque loquendi (194)? Cur ipsa magisterio coercentur quae aliis magistra est (ut infra 382 Virgo magistra)?". From opta he conjectured apta, which gives excellent sense.

But coercita too is corrupt. Since the Maiden is magistra (382) she should not be represented as constrained in any way. Hence in place of nudosque coercita I have written ludoque exercita, "trained by schooling". Exercere is used with ludus in Tac. Ann. 3, 66, 3 : Iunio Othoni litterarium ludum exercere uetus ars fuit.

Housman retains coercita, reading line 190, in the form ora magisterio nodisque coercita Virgo after line 201. He refers ora and coercita (neuter pl., agreeing with ora) to frenat in 201, taking frenat and line 190 together to mean: "The Maiden bridles and restrains her offspring's mouth with her teaching knot". This is unsatisfactory, for (1) Virgo gives her offspring the gift of decus linguae (194) for she is magistra (382). How then can she in her role of magistra (magisterio, 190) bridle her offspring's mouth? (2) The metaphor in frenat/ora magisterio nodisque is grotesque. It summons up a picture of a man being gagged.

Lines 200-1 give much better sense without 190. They mean that the offspring of the Maiden do not show their great eloquence and writing ability until of mature age, because when

they are young they are bashful, just like young maidens of Virgo's years.

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33

nam quidquid in usus  
 ignis eget poscitque nouas ad munera flammās      245  
 sub te censendum est. scrutari caeca metalla  
 depositas et opes terrarum exurere uenis  
 materiamque manu certa duplicare repertam,  
 quicquid et argento fabricetur, quicquid et auro,  
 quod ferrum soluant atque aera camini      250  
 consummentque foci Cererem, tua munera surgent.

245 Nouas O, bonas Haupt, tuas Shackleton Bailey.

248 duplicare repertam Haupt, duplicare per artem Markland,  
 duplicare erit a te Housman, duplicari et arte O.

"Nouas quorsum pertineat mihi non magis liquet quam Hauptio qui Opusc.2 p 342 bonas scribendum suspicatus est". Haupt explains bonas ad munera as meaning utiles ad facienda munera. Shackleton Bailey's tuas is also possible.

I prefer Haupt's conjecture repertam in 248 to Housman's erit a te, because erit a te is doubtful metrically. Housman defends it metrically as follows: "Similis hexametri clausula est 1.521 semper fuit idem, simillima Prop.2.24.51 potius precor ut me; In fine uersus habentur a se 3.200, in se 97; duriuscula in quinto

pede elisio 2.762 fundata elementis.

Three features make 4.248 dubious metrically, if Housman's conjecture erit a te is accepted. Firstly, erit a te (virtually equivalent to an ending in two disyllables, since a and te go closely together) is not preceded by a monosyllable (i.e. there is no bucolic diaeresis in the line). There are eleven cases in Manilius where two disyllabic words ending a line are preceded by a monosyllable (1.80, 292, 408, 422, 482; 2, 216, 577, 814; 3, 28, 246; 4, 800. I do not include the spurious line 1.707). There is only one where they are not (1.521 idem semper erit quoniam semper fuit idem) and here the balance and sense of the sentence required Manilius to put semper in this position. There is no such special factor operating in 4.248.

Secondly, although it is a small point, other than 4.248 as emended by Housman, no verse in Manilius ends with a disyllabic word followed by two monosyllables.

Thirdly, with the exception of 4.248 as emended by Housman and 2.762, no verse in Manilius ending with a tetrasyllabic word, two disyllabic words or a disyllabic and two monosyllabic words, exhibits an elision at the diaeresis of the fourth foot. 2.762 is not parallel to 4.248, for in 2.762 the ending (fundata elementis) is an echo of Lucretius. Manilius is discussing words in 2.762. Lucretius uses elementa with uerbis in 1.197, 824 and 2, 689. He uses elementis at the end of the line 11 times (1.913; 2,393, 463, 691, 981; 3,244; 5, 456; 6,330, 354, 1009, 1012).

Two of these instances (2.691: confiteare alia ex aliis constare elementis and 2.981: ipsa quoque ex aliis debent constare elementis) seem to have provided the metrical pattern (trissyllabic word with an elided short vowel at the end, followed by elementis) of Manilius' ending. Note that constare occurs in both these lines of Lucretius, as in Manilius (quae nisi constiterint primis fundata elementis).

At the end of Manil.3.535 GL read casusque minantur, M reads casusque animantur. From M's reading Housman conjectured casusque animantum. From what I have expounded above it is clear that this conjecture is metrically dubious.

There is one further line with a tetrasyllabic ending which does not have a bucolic diaeresis, line 5.257. But this is not a parallel to 2.248 in this respect, for the line (pallentes uiolas et purpureos hyacinthos) is an echo of Virgil. The combination of uiolae and hyacinthi and the clausula purpureos hyacinthos were suggested by Virg.Aen.11.69: seu mollis uiolae seu languentis hyacinthi and purpureos by the suaue rubens hyacinthus ending Ecl.3.63.

34

et nunc per scopulos, nunc campis labitur amnis 423

et faciens iter aut quaerens curritue reditue.

424 et Gain, aut O. currit Barth, urit O, pergit Bentley  
(in notes written at the beginning of a copy of the 3rd edition

of Scaliger, book no. 681c21 in the British Museum library).

"Pro urituē...Barthius adu. p.1207 currituē proposuit..  
 .debut aut curritque aut uelut sistituē, neque enim coeunt labitur  
currituē". Housman. There is another solution: to read et  
 instead of the first aut in 424. Then the ue in currituē does not  
 join currit to labitur. Currituē redituē "it either flows or  
 returns" is joined to labitur with et. Similarly que...que follow  
et and nec in 4.775 et...tollitque premitque and 5.49 nec...  
 facietque tegetque.

In these lines Manilius is thinking of the two different  
 media through which a river flows - rock and soil. When flowing  
 over rocks (per scopulos) it has to carve its path (faciens iter)  
 and since where the ground is rocky the gradient is generally  
 steep, it flows straight ahead (currit). When flowing through  
 loam or sand (campis labitur) it tends to meander (quaerens iter)  
 and sometimes doubles back on its tracks (redit).

35

et quinta in Chelis et septima inutilis astri 473

astri Gain, aestu O.

"The fifth part of the Claws is useless and the seventh part of  
 this sign is likewise useless".

Aestu seems corrupt, for, as Housman remarks: "aestus  
 siue ignis (412, 498) mentio, praesertim octo unius signi partes  
 uitiantis, propterea inopinata et mirabilis est quia in ceteris

signis eorumque partibus nulla ex quattuor noxae causis commemoratur". Read then astri instead of aestu. Nec...utilis, without any noun in the ablative case (such as aestu) to describe in what way it is useless, is used of a pars damnanda in 4.470: nec quarta nec octava utilis unquam. Astri is used in 473 to refer to the constellation mentioned earlier in the line, just as signi is used at the end of 4.454: pestifera in Geminis pars prima et tertia signi. The words inutilis astri end Aus.369.37 (7.8.37 ed Peiper): aemulus octavi conspectus inutilis astri.

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36

quod superest Europa tenet...	681
maxima terra uiris et fecundissima doctis	686
artibus: in regnum florentes oris Athenae;	
Sparta manu, Thebae diuis, et rege uel uno	
princeps Pella domus, Troiani gratia belli;	
Thessalia Epirosque potens uicinaque utrisque	690
Illyris, et Threce Martem sortita colonum,	
et stupefacta suos inter Germania partus;	
Gallia per census, Hispania maxima bellis;	
Italia in summa, quam rerum maxima Roma	
inposuit terris caeloque adiungitur ipsa.	695

687 artibus Housman, urbibus O.

689 Pella Schrader, illa O.

690 utrisque Gain, ripis O, ripa Housman (in his commentary).

Schrader's Pella is correct, for when Manilius mentions Athens, Sparta, Thebes, Thessaly, Epiros, Illyria, Thrace, he would not have omitted Macedonia. Shackleton Bailey (op.cit. p 85) claims that "Pella breaks the geographical sequence - Southern Greece, Thessaly, Epiros etc." But there is no geographical sequence. Manilius first mentions Athens, then Sparta, south of Athens, then Thebes, north of Athens.

Shackleton Bailey is also wrong in rejecting Housman's artibus in 687, for 687-695 is not, as Shackleton Bailey maintains, a mere "list of European regions". The uiri of some (689-692) are mentioned, and the artes of the regions of Greece (687-8), Gaul and Spain (693) and Rome and Italy (694-5). The artes of the latter consist in ruling the world (cf. Virg. Aen. 6.851-3: tu regere imperio populos, Romane, memento/hae tibi erunt artes - pacisque imponere morem/parcere subiectis et debellare superbos).

Ripis in 690 makes no sense. Housman's ripa is unlikely. He defends it as follows: "melius uidetur ripa, ut Illyris adiectivum sit, sicut Illyris ora Ovidius dixit trist. 2, 225 et post eum Silius Ausonius Sidonius". The passages in the last three authors are Sil. 8.292, Aus. 173, 9, Sid. 2, 224. But no author uses ripa with an adjective as the equivalent to the name of a country, only ora. Housman further remarks: "ceterum illud potens non ad solam Epiros sed ad reliquas duas terras referendum est, quae nisi cum nota aliqua hic non commemorarentur". It is true that Epiros and Illyris "nisi cum nota aliqua hic non

commemorarentur", but with the manuscript text it is very difficult to refer potens to Illyris. I believe Manilius wrote utrisque where the manuscripts have ripis. Illyris is uicina utrisque, for it adjoins Epirus and is near Thessaly. Vtrisque allows potens to refer to Illyris as well as the other two countries. I translate Thessalia, Epirosque potens uicinaque utrisque/Illyris as "Powerful Thessaly and Epirus and Illyris, near them both, likewise powerful".

If utrisque is correct, VT fell out after VE, leaving RISQ, written risq in minuscules. In minuscules the change of q to p is easy. risp was altered to ripis for the sake of the metre and to restore a semblance of sense. The elision of short e into short u at 5w, found in uicinaque utrisque, is also found in 2.177 (Virgine utrimque).

BOOK 5.

37

cum uero in uastos surget Nemeaeus hiatus	206
exoritur pernix latratque Canicula flammam	
et rabit igne suo geminatque incendia solis.	
qua subdente facem terris radiosque mouente	
induitur cineres orbis fatumque supremum	210
sortitur, languetque suis Neptunus in undis,	
et uiridis nemori sanguis decedit et herbis.	

cuncta peregrinos orbis animalia quaerunt  
 atque eget alterius mundus; natura suismet  
 aegrotat morbis nimios obsessa per aestus 215  
 inque rogo uiuit: tantus per sidera feruor  
 funditur atque uno canescunt lumine cuncta.  
 haec ubi se ponto per dextras extulit oras,  
 nascentem quam nec pelagi restinxerit unda,  
 effrenos animos uiolentaque pectora finget 220  
 irarumque dabit fluctus odiumque metumque  
 totius uulgi.

207 pernix Gain, que canis O, candens Schrader, laeua Housman,  
 pelago Helm (op.cit.p 141).

208 rabit Scaliger, rapit O.

210 induitur Gain, dimicat in O, diuinat Housman.

217 canescunt Gain, ceu sunt in O, censentur Garrod (on 2.226).

219 dextras Gain, proximas O, pronas cod.Flor, primas Cod.Bodl.

In line 207 que canis is corrupt. Huet ad.loc shows that canis and canicula are both used indifferently of Sirius and Canis Maior, hence canis cannot mean one, Canicula the other. Que as well as canis must go. Housman remarks: "mendum sic corrigendum uidetur ut simul tollatur, quae facit ut tamquam <sup>2</sup>ἐκ παραλλήλου ponantur exoriendi latrandique uerba, que particula". Laeua and candens are possible conjectures instead of que canis, but better than either of them is, I believe, pernix. Pernix is a suitable word to use of Canis Maior, because subsequitur rapido contenta

Canicula cursu (1.396). Pernix does not occur elsewhere in Manilius (for Dulcinius' per montes, not Withof's pernices, seems to be what Manilius wrote in 5.138, where the manuscripts offer per noctes). Germanicus, however, uses it of several constellations which, like Canis Maior, lie near the equator and hence move swiftly across the sky - of Aries (Phaen.227 ed.Koehly, Poetae Bucolici et Didactici - the most recent edition available in Fisher Library), Orion (332), Lepus (614), also the southern Centaurus (679). Germanicus also states aliis (sc. signis aequatorii) pernix saltus, maiore trahuntur/mole alia (583-4). Manilius himself says that Orion creates uelocia corpora...atque agilem officio mentem (5.61-2), the reason being, as Housman explains on 5.58, that Orion lies at the equator.

Pernix also has the idea of obstinacy and determination, from its etymological sense (per nitor). This sense can be seen in Hor.ep.2.42: pernicis uxor Apuli, Claud.36.376f (of Ceres in her obstinate search for her lost daughter): pernix inuadit utramque (sc.cupressum)/cincta sinus, exerta manus armata bipenni,/ alternasque ferit totisque obnixa trementes/uiribus impellit. and Sil.3.545. In Verg.Georg.3.230 (if the manuscript reading pernix is accepted, not the pernox read by the scholiast on Iuu.8.10) pernix has solely the sense perseuerans (Seruius comments: "pernix autem perseuerans, a pernitendo tractum est"). The additional connotation of obstinacy and determination present in pernix makes it an even more appropriate adjective to use of Canis Maior, for

he is represented as eagerly striving to catch the Hare (subsequitur rapido contenta Canicula cursu (1.396); cernis ut ipsum etiam sidus uenetur in astris;/ praegressum quaerit Leporem comprehendere cursu (5.232-3) ).

Helm's pelago for que canis is an inferior conjecture, for it makes Manilius say the same thing as he says in 218: haec ubi se ponto...extulit.

Latrat flammas (207) is a bold expression. Housman quotes several similar expressions in other authors. But perhaps Manilius wrote, not latratque Canicula flammas, but flagratque Canicula flammis (flammis is the reading of L<sup>2</sup>, flammas the reading of GLM). Flagrare is used of Canis Maior in Hor.c.3. 13.9: te flagrantis atrox hora Caniculae, Auien.Arat.1376: cum caeruleo flagraret Sirius astro and Columella 10.400: canis Erigones flagrans Hyperionis aestu.

Housman reads rapit in 208 and paraphrases the verse: "Caniculae ignis ignem solis ad se rapit et uicissim auget". Helm (op.cit.p 135) adopts Scaliger's rabit. He objects to Housman's paraphrase: "Wie das grammatisch aus den Worten herauszulesen ist, wird nicht erklärt" and further on "vermisst man ein Objekt". But the object of rapit, according to Housman's interpretation, is incendia solis, which is also the object of geminat. This, I believe, is how the line should be construed grammatically on Housman's interpretation: "The Dog, by means of its own heat (igne suo), draws the sun's heat to itself (rapit incendia solis) and  $\left\langle \text{in its turn} \right\rangle$  doubles the sun's heat (geminat incendia solis)

〈by giving some of its own heat to the sun〉". Housman continues: "aliis, ut Columellae 10.400 canis Erigones flagrans Hyperionis aestu, sidus, a sole, aliis, ut Plinio n.h. 2.124 solis uapor geminatus ardore sideris, sol a sidere accendi uidebatur: Manilius utrumque coniunxit".

It must be admitted, that if rapit is read, much has to be supplied (as I have done in the paraphrase above) to make the sense of the lines clear. Scaliger's conjecture rabit, which Housman himself calls ingeniosa, and supports by adducing Hor. Epl.1, 10, 16 (rabiem Canis et momenta Leonis) and Varr.ap.Non p 40 (quid latras? quid rabis?), is a big improvement. With it the meaning of the line: "The Dog rages because of its heat and doubles the sun's heat" is clear. The detail that the Dog derives heat from the sun, present in Housman's interpretation, is out of keeping with 209-217, in which only the Dog's heat is mentioned.

In line 210 the manuscript dimicat is corrupt. Housman remarks that "nulla orbis cum Canicula dimicatio est". Hence I conjecture, instead of dimicat in cineres orbis, induitur cineres orbis ("the earth is covered with a mantle of ash"). When the Dog is blazing, at the height of summer, trees burn and ash is deposited over the earth (or perhaps Manilius is simply thinking of the ashen hue of the earth in summer, on which see my note on line 217 below). A similar use of induere is found in Val. Flacc.4.509: iamque eoas cinis induit urbes and Sil.17.195: induitur tota Africa flammis. Manilius uses a contained accusative with indui (really middle, not passive voice) in 5.547:

induiturque sinus non haec ad uota paratos and 5.510 Mithridateos uultus induta tropaea. Induitur cineres is supported by line 216 <natura> in...rogo uiuit.

Housman proposes (in his commentary) diuinat cineres orbis ("the earth prophesies ashes"). But diuinare is not elsewhere used of inanimate objects (such as the earth). The metaphor consisting in calling the earth a prophet is unparalleled.

In place of dimicat in cineres Ellis (Noct.Man) proposed ima dat in cineres, Postgate (Silu.Man.) demigrat in cineres, Alton (Hermathena 46, 1931, p 262) dum micat in cineres. But the earth does not become ash every summer.

The manuscript ceu sunt in flumine in 217 is corrupt. Scaliger restored lumine for flumine. However ceu sunt in is not satisfactory. Housman remarks that "cuncta sunt in uno lumine obscure ac paene insulse dictum uidetur". "Itaque" he continues "reponendum puto quod Garrodus ad 2.226 coniecit uno censentur lumine, ut solius Caniculae candore cunctorum census constare dicatur ex eoque cuncta aestimari". But this adds nothing to the context; rather, it introduces a quite irrelevant detail. Manilius wrote, I believe, canescunt, where the manuscripts give ceu sunt in. Uno canescunt lumine cuncta means "The whole world has taken on an ashen hue from the heat of a single source of light - the Dog". This continues Manilius' description of the earth, of which he has said induitur cineres (210) and in...rogo uiuit (216). Canescere is used of the effect of heat in Ou.met.2.212: pabula

canescunt <solis aestu>, of Phaethon's destructive journey in his father's chariot, and Plin.n.h.31.106 canescentibus siccitate conuallibus. Canescere is used of ashes in Sil.17.596: lanigeros cinere Ausoniae canescere lucos and Solinus 22.10: ignes nunquam canescunt in fauillas. Manilius describes the colour of the milky way in two separate metaphors (ut freta canescunt) in 1.708 and infusumque loco cinerem mundumque sepultum in 1.734.

In line 218 the manuscript reading proximas neither scans nor makes sense. I believe Manilius wrote dextras. I translate the line: "When the Dog rises to the right of the Lion". The statement that the Dog rises to the right of the Lion is false; it really rises to the left, but Manilius is also in error in 5.37, where he makes Argo rise to the right of Aries, and at 5.486, where he makes Aquila rise to the left of Aquarius.

Housman accepts the conjecture found in the Cod.Bodl., primas, and quotes 1.643: ubi se primis extollit Phoebus ab undis as containing a parallel to per primas oras. But primis undis means primoribus undis (so Housman). I can see no sense in per primas oras. It cannot mean "past the edge of the horizon", for the horizon, being a line (Manilius himself calls it linea in 1.654) has no edge. It cannot mean "past the eastern horizon", for that is not possible unless there is a contrasting phrase referring to the western horizon (cf.Stat.Theb.1.200: primaequae occiduaeque domus - east and west). Housman rightly rejects the conjecture pronas found in the Cod.Flor., for pronas is suitable for the

western, not eastern horizon.

In his note on 5.37, Housman has given references to expressions Manilius uses to say that one sign rise to the right or left of another. Among them are a dextri lateris regione (37), caelo dextro (539) and four with parte (57, 174, 486, 505). It is thus quite plausible that Manilius should use the phrase per dextras...oras to describe the rising of a constellation.

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38

nunc surgente Lyra testudinis enatat undis  
 forma per heredem tantum post fata sonantis,        325  
 qua quondam sonitum referens Oeagrius Orpheus  
 et sensus scopulis et siluis addidit aures  
 et Diti lacrumas et morti denique finem.

326 sonitum GL, sonum pro glossemate L, somnum M. que ferens O.  
 sonitum referens Reinesius, mentemque feris Francius, somnumque  
 fretis Housman (in his commentary).

Housman agrees with Bentley's objection to sonitum:

"continuo post sonantis addere sonitum non poetae est uigilantis".

Several repetitions of the same word (not merely cognate words such as sonantis and sonitum) in clauses or phrases of the one sentence are found in the manuscripts of Manilius: nihil est nisi fabula caelum/terraque composuit caelum (2.37-8), Pallas...dignum ...putauit/segue in Arachnaeo magnam putat esse triumpho (4.135-6), timuit incendia caelum...atque uno timuit condi natura sepulcro

(4.835 & 837), solemque reuersum/et caecum sine sole diem (5.462-3). Cf. also the catalogue of repetitions of final words in successive or nearby lines I have compiled in my note on 1.223-4. Some of these lines have been emended by Bentley or Housman to remove the repetition. However, the number of examples suggest that some, at least, of the repetitions are Manilius' own.

Housman prints somnumque feris, yet rightly remarks of it: "somnus feris addi, quae etiam tacente Orpheo facile obdormiscunt, non satis proprie dici uidetur". The same objection applies to Housman's somnumque fretis. Neither somnumque feris nor somnumque fretis fits in with the other items of the catalogue, which are things which otherwise never happen, for sometimes the sea is quiet (cf. 3.631: tepidum pelagus pacatas languet in undas) and feri sometimes sleep.

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32

ille tenet medicas artes ad membra ferarum

et non auditos mutarum tollere morbos

hoc est artis opus, non expectare gementis 355

et sibi non aegris iamdudum credere morbos.

356 aegris Gain, aegros O, aegrum dett.

morbos Gain, corpus O.

Gronovius obs. 2.11 accepts the conjecture aegrum, which he explains as follows: "Τὸ aegrum accipiendum quasi bis positum esset, et iamdudum credere corpus aegrum, quod sibi non est aegrum,

id est ignorat morbum suum necdum eum gemitu fatetur". But Gronovius quotes no parallels to show that aegrum can be understood from a non aegrum earlier in the same clause. The manuscript reading aegros not only has the fault that to make any sense of the line aegros must be taken as if written twice, but also that corpus must be taken as an accusative dependent on aegros (i.e. aegros... corpus would mean "sick in body"). But what else could a horse be sick in? Even if corpus made sense, to have such an inessential word in such an important position in the line would be impossible.

The line makes sense if we read aegris instead of aegros and morbos instead of corpus. Then aegris is dative and fuisse must be supplied. I translate et sibi non aegris iamdudum credere morbos "and realize that diseases have long been afflicting animals which are not sick in their own eyes". A similar use of credere and the dative is found in 5.299: teue Philoctete/cui malim credere parti? and 4.933: ne dubites homini diuinos credere uisus, which Housman paraphrases "illud credere, diuinos homini uisus esse". Esse must be supplied in both these passages. In Sil.5.404f: ille sibi longam Clotho turbamque nepotum/crediderat, quoted by Housman on 4.933, the future fore is to be supplied. Shackleton Bailey on Prop.1.1.23 (Propertiana pp 5-6) quotes further examples of credere and dative in this sense (examples from late Latin).

By conjecturing morbos in 356, I have introduced in 356 a clausula (credere morbos) similar to that in the verse two lines

before it (tollere morbos). But that is no objection to morbos in 356. In lines 2.756 and 759 there occur the clausulae ponitur usus, traditur usus. Among other repetitions of similar clausulae are the following: sidera partes, sidera partes (3.489.492), dona puellae, ipsa puella (5.254, 255), conuertere clauum, effundere rector, inflectere tonsas, euerrere retibus aequor, exponere captos, carcere fraudem (4.282-7), soluere lanas, ducere telas, uendere uestes (4.130-2), maxima bellis, maxima Roma (4.693, 694), sidere languent, funere lugent (4.845, 847) reuolauerit orbe, penetrauerit orbem (5.640, 641).

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## 40

cumque Fidis magno succedunt sidera mundo  
 quaesitor scelerum ueniet iudexque reorum, 410  
 qui commissa suis rimabitur argumentis  
 in lucemque trahet tacita latitantia fraude.  
 hinc etiam inmitis tortor poenaeque minister  
 et quisquis ueroue fauet culpamue perodit  
 proditur atque alto quo iurgia pectore tollat. 415

410 iudex Jocelyn (in conversation with me, October 1967), uindex O.

Housman takes uindex reorum (line 410) to mean: "ad-sertor qui eos a falsis criminibus uindicabit, quod iudicis est uero fauentis". Buehler (op.cit. p 485) rightly objects to this, stating: "Entscheidend ist aber der Zusammenhang: ist es schon unwahrscheinlich, dass v.r. nach quaesitor scelerum ohne den

entscheidenden Zusatz, dass es sich um zu Unrecht Angeklagte handelt, "Befreier", heissen soll, so erscheint es völlig unverständlich, dass dann der folgende Relativsatz nur den ersten Begriff erläutere". The other interpretation of uindex reorum: "punisher of defendants", does not give a suitable sense either, for, like Housman's interpretation, it is at variance with the rest of 410-1, which talk of the process of extracting a confession of guilt. It is only in 413 that the subject of punishment for a crime is introduced. There is a further objection to this interpretation, given by Housman: "rei indemnati puniendi non sunt".

What is required in the second half of 410 is a phrase with the same meaning as the first half. This is obtained by emending uindex to iudex.

41

nunc alterna ferens in lentos bracchia tractus 423

⟨conspicuis franget spumanti limite pontum⟩

et plausa resonabit aqua, nunc aequore mersas

diducet palmas furtiui remigis instar, 425

nunc in aquas rectus ueniet passuque natabit

et uada mentitus reddet super aequora campum;

aut in mota ferens in tergo membra latusque

non onerabit aquas summisque accumbet in undis

pendebitque super pontum sine remige motus. 430

illis in ponto iucundum est quaerere pontum.

425 furtiui remigis instar Gain, Regiomontanus had already con-  
jectured furtiuo remigis usu. furtiuo O, remis L and G before it  
 was corrected. Either remis or renus M, remus G after correction,  
 in ipso O, furtiua biremis in ipso Housman.

430 pontum L. Herrmann (in either RBPh.11, 1932, 151 or RBPh.12,  
 1933, 1408. I do not have access to this periodical for these  
 years and derive my information from Helm, op.cit. p 147, who does  
 not say in which place this conjecture was proposed), totum LM,  
 tutum G.

motus Herrmann, uotum est O, est was deleted in Cod.Flor and Bodl.

There is corruption in the last half of 425. Housman's  
 conjecture furtiua biremis, which introduces a metaphor by which a  
 man swimming breast stroke is called a "hidden two oared boat", is  
 not satisfactory. Such a metaphor does not occur in Manilius or  
 poets of his time.

Metaphor in Manilius, as in Latin generally, is found  
 with verbs, not nouns only. I list some of the more striking of  
 Manilius' metaphors. In 1.671 he says of the planets exercent  
uarios naturae lege choreas (a metaphor from choral dancing). Sex-  
 ual metaphors occur in 4.615-6: hinc penitus iuuenisque fretum  
mersaeque puellae/truditur iniutum (where the Propontis is com-  
 pared to the vagina of a woman being raped) and 3.664-5: dum terra  
tepore/autumni resoluta patet, dum semina ducit (where the earth  
 is compared to a woman opening up to receive seed). An agricul-  
 tural metaphor is found in 1.708 freta canescunt sulcum ducente

carina. In 4.597f pontus and in 1.561f circuli caeli govern many verbs describing persons. In 516f the earth is personified: nec se cognoscunt terrae. Verbal metaphor with the planets, constellations and parts of the zodiac is very common. The most striking examples are perhaps 1.409:  $\left\langle \text{Sirius} \right\rangle$  frigida caeruleo contorquet lumina uultu and 1.532 haec igitur texunt aequali sidera tractu, where the metaphor is changed suddenly.

When men are compared to boats note that the metaphor is usually verbal. In Propertius we find non est ingenii cumba grauanda tui (Prop.3.3.22) and uidisti a lecto quem dare uela tuo (Prop.3.20.2). In Ovid Her.18.215 remis ego corporis utar, note the presence of the verb utar and the noun corporis, which make the metaphor plainer and of a different type from Housman's furtiua biremis. In Her.18.148 (idem nauigium, nauita, uector ero) the presence of the nouns nauita and uector make the metaphor in which a man is called nauigium different from Housman's furtiua biremis.

In 430 the reading of none of the manuscripts makes sense. I have adopted Herrmann's conjecture pontum...motus. I take super pontum ἀπὸ κοινῶς with both pendebitque and sine remige motus, translating pendebitque super pontum sine remige motus "he floats over the surface of the sea, moving over it without the help of oars". A man who floats does not use his arms like oars, as a man swimming breast stroke (described in 425) does; he floats over the surface of the sea.

Bentley conjectured totus sine remige uelum est "the man consists entirely of sail without oar". Housman accepts this

(without the est). The metaphor Bentley introduces is even more violent than that in Housman's furtiva biremis. A man is not called a ship, dubious as that metaphor would be, but a sail, a piece of cloth. Even if there were nothing wrong with the metaphor introduced, Bentley's conjecture uelum would still not be satisfactory. When a man is swimming his hands, as it were, perform the function of oars, but when he is floating he has nothing corresponding to a sail.

Helm (op.cit. 137) proposed totus...lembus. But this introduces a dubious metaphor, and lembus for uotum is, as Helm himself sees, not palaeographically good.

42

uiui luctum memorare sepulchri

461

ructantemque patrem natos solemque reuersum

et caecum sine sole diem....iuuabit.

461 uiui Bentley, luctum dett., sepulchri GL

uix una trium Housman, sepulchra LM

auri luxum M, atri luxum GL, uiui bustum Bentley.

463 sole O, nube Ellis, luce Markland.

"It is their delight to tell of the grief of one who was a living sepulchre, of a father belching forth his children, of the sun's recoil in horror and how the day became invisible without the sun".

Manilius is here talking of the myth that Atreus served

Thyestes a meal of Thyestes' own children. Thyestes thereby became a living sepulchre of his own children.

The expression uiuum sepulchrum is used to describe Thyestes by Sidonius 9.113 (uiuum pignoribus ("children") fuit sepulchrum). Lucretius (5.993 uiua uidens uiuo sepeliri uiscera busto) calls a wild beast which devours humans a uiuum...bustum. Gorgias (quoted by the writer "De sublimitate" 3,2) talks of  
 ὄνες ἔκφυχου τάφου

The four elements in Manilius' account as reconstructed above: 1) Thyestes' grief 2) That he was a living sepulchre 3) The banquet of children 4) the recoil of the sun in horror, are all mentioned in roughly the same order by Sidonius 9.110-116 (Who may well have had Manilius' account in mind when he wrote): nec esculentam/fletus pinguis ad dapem Thyestae/fratris crimine qui miser uoratis/uiuum pignoribus fuit sepulchrum/cum post has epulas repente flexis/Titan curribus occidens ad ortum/conuiuiam fugeret, diem fugaret.

On page xxxiv of his introduction to Vol.5 Housman calls his conjecture uix una trium one which "I judge to quite certain". I do not share his confidence. The latinity of his reconstruction is faultless. Housman defends the plural una...sepulchra by adducing Cuid.her 11.116 tua...sepulchra, Verg.Aen.2.642f una...excidia. He explains uix by stating "quia non toti comesi sunt". In other words, he is taking uix una trium memorare sepulchra as "Thyestes, who scarcely provided a single sepulchre for three sons". (i.e.

part of his three sons shared a single sepulchre - Thyestes himself. Part of them, the uneaten portions, had no sepulchre). Steward (op.cit. p 185) and Helm (op.cit. p 138) contend that the conjecture is grotesque. The expression is certainly brutally direct. But it fits in with ructantem in the next verse. The real objections to Housman's reconstruction are 1) It is not clear from uix una trium...sepulchra that a living sepulchre (i.e. Thyestes) is meant. 2) Although Housman postulates an intermediate stage of corruption (uix una trium= liixun atri um) his conjecture involves a transposition, a discarding of um and an alteration in word division. Viui luctum is closer palaeographically to atri or auri luxum than uix una trium is.

Housman objects to the repetition of sol in 462 and 463. I can see no objection to the repetition. Cf. tectique auro iam uescimur auro (5.292), cernere sub terris undas, inducere terris (4.261) and the passages quoted in my note on 5.326.

43

et, si quis studio scribendi mitior ibit, 470  
comica componet laetis spectacula ludis.

Manilius is contrasting comedians with tragedians.

I have adopted in my translation of 470: "If a milder type of man becomes eager to write", a suggestion made to me by Jocelyn, that studio is dative after ibit. Mitior refers to a man's character. If studio scribendi is taken with mitior the phrase

mitior studio scribendi cannot mean "milder in the type of work he writes", as it should if it is to make sense, but "less eager to write". This is nonsense. A comic poet is not one who is not as eager to write as a tragic poet.

If taking studio as dative after ibit produces unmanilian Latin, it would appear that the line is corrupt.

44

hinc Pompeia manent ueteris monumenta triumphi	513
et Mithridateos uultus induta tropaea,	510
non extincta die, semperque nitentia flammis.	515

515 die Thomas (op.cit. p 25), lues O.

nitentia Gain, recentia O.

"As a result of this art the monuments of Pompey's triumph of long ago, and the trophies bearing the likeness of Mithridates, still remain, their lustre not lost through the passage of time, ever gleaming with fiery rays".

The monumenta and tropaea mentioned are gold and jewels (Plin.n.h.37.11 ff, Appian.bell.Mithr.116-7). As Housman points out, semper recentia flammis can only refer to something that is repeatedly burnt. Hence <sup>e</sup>Kra<sub>mer</sub> (De.man.ast.p 55) and Housman thought the verse misplaced (like 514, which Jacob restored to its correct position after 5.542). But, as it stands, the verse will not fit between any verses in the extant part of Manilius' poem. Housman remarked of Kraemer's transposition: "frustra eum inter

coniunctissimos uersus 1.889 et 890 inferciri uoluit A. Kraemerus".

If the verse is to be retained in its manuscript position, recentia must be emended, for gold and jewels are not things that are repeatedly burnt. Hence I conjecture nitentia. Manilius uses nitor of jewels in 5.404 (lapidumque nitore) and nitere in 5.509, of gold and jewels. Pliny.n.h. 37<sup>69</sup>: 〈smaragdos〉..longius quam ceteros nitere also uses nitere of jewels. The word flamma is used to describe the lustre of jewels in Claud.8.587-8: fulgor Hiberus/temperat arcanis hyacinthi caerulea flammis.

If 515 is to be retained in its manuscript position lues too must be emended. I accept Thomas' emendation, die and also his explanation of it: "par le temps". Manilius uses die in this sense in 4.823: mutantur sed cuncta die uariantque per annos. Manilius has to reassure his readers that the trophies are non extincta die, for the trophies have been in the temples for a considerable time, they are ueteris monumenta triumphi.

Alton (Hermathena 46, 1931, p 263) also conjectured die for lues, unaware that Thomas had made the conjecture before him. However, he takes the word differently, translating non extincta die as "unquenched by sunlight". Alton quotes in support of this Plin.n.h.37.63 〈smaragdi〉 e longinquo amplificantur uisu inficientes circa se repperussum aera, non sole mutati, non umbra, non lucernis, semperque sensim radiantes et uisum admittentes. "Non extincta die" he continues "says the same thing as non sole mutati. Artificial fires are dimmed in sunlight, but the fires emitted by

gems seem to blaze as brightly as ever". But this interpretation does not fit in with the context, as Thomas' does.

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