

Hippolytus

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CHAP. I.—SYSTEM OF THE ASTROLOGERS; SIDEREAL INFLUENCE; CONFIGURATION OF THE STARS.

BUT in each zodiacal sign they call limits of the stars those in which each of the stars, from any one quarter to another, can exert the greatest amount of influence; in regard of which there is among them, according to their writings, no mere casual divergency of opinion. But they say that the stars are attended as if by satellites when they are in the midst of other stars, in continuity with the signs of the Zodiac; as if, when any particular star may have occupied the first portions of the same sign of the Zodiac, and another the last, and another those portions in the middle, that which is in the middle is said to be guarded by those holding the portions at the extremities. And they are said to look upon one another, and to be in conjunction with one another, as if appearing in a triangular or quadrangular figure. They assume, therefore, the figure of a triangle, and look upon one another, which have an intervening distance(1) extending for three zodiacal signs; and they assume the figure of a square those which have an interval extending for two signs. But as the underlying parts smpathize with the head, and the head with the underlying parts,(2) so also things terrestrial with superlunar objects.(3) But there is of these a certain difference and want of sympathy, so that they do not involve one and the same point of juncture.

CHAP. II.—DOCTRINES CONCERNING AEONS; THE CHALDEAN ASTROLOGY; HERESY DERIVABLE FROM IT.

Employing these (as analogies), Euphrates the Peratic, and Acembes 4 the Carystian, and the rest of the crowd of these (speculators), imposing names different from the doctrine of the truth, speak of a sedition of AEons, and of a revolt of good powers over to evil (ones), and of the concord of good with wicked (AEons), calling them Taparchai and Proastioi, and very many other names. But the entire of this heresy, as attempted by them, I shall explain and refute when we come to treat of the subject of these (AEons). But now, lest any one suppose the opinions propounded by the Chaldeans respecting astrological doctrine to be trustworthy and secure, we shall not hesitate to furnish a brief refutation respecting these, establishing that the futile art is calculated both to deceive and blind the soul indulging in vain expectations, rather than to profit it. And we urge our case with these, not according to any experience of the art, but from knowledge based on practical principles. Those who have cultivated the art, becoming disciples of the Chaldeans, and communicating mysteries as if strange and astonishing to men, having changed the names (merely), have from this source concocted their heresy. But since, estimating the astrological art as a powerful one, and availing themselves of the testimonies adduced by its patrons, they wish to gain reliance for their own attempted conclusions, we shall at present, as it has seemed expedient, prove the astrological art to be untenable, as our intention next is to invalidate also the Peratic system, as a branch growing out of an unstable root.

CHAP. III.—THE HOROSCOPE THE FOUNDATION OF ASTROLOGY; INDISCOVERABILITY OF THE HOROSCOPE; THEREFORE THE FUTILITY OF THE CHALDEAN ART.

The originating principle,(5) and, as it were, foundation, of the entire art, is fixing(6) the horo– scope.(1) For from this are derived the rest of the cardinal points, as well as the declinations and ascensions, the triangles and squares, and the configurations of the stars in accordance with these; and from all these the predictions are taken. Whence, if the horoscope be removed, it necessarily follows that neither any celestial object is recognisable in the meridian, or at the horizon, or in the point of the heavens opposite the meridian; but if these be not comprehended, the entire system of the Chaldeans vanishes along with (them). But that the sign of the horoscope is indiscoverable by them, we may show by a variety of arguments. For in order that this (horoscope) may be found, it is first requisite that the (time of) birth of the person falling under inspection should be firmly fixed; and secondly, that the horoscope which is to signify this should be infallible; and thirdly, that the ascension(2) of the zodiacal sign should be observed with accuracy. For from(3) (the moment) of birth(4) the ascension of the zodiacal sign rising in the heaven should be closely watched,(5) since the Chaldeans, determining (from this) the horoscope, frame the configuration of the stars in accordance with the ascension (of the sign); and they, term this—disposition, in accordance with which they devise their predictions. But neither is it possible to take the birth of persons, falling under consideration, as I shall explain, nor is the horoscope infallible, nor is the rising zodiacal sign apprehended with accuracy.

How it is, then, that the system of the Chaldeans(6) is unstable, let us now declare. Having, then, previously marked it out for investigation, they draw the birth of persons falling under consideration from, unquestionably, the depositing of the seed, and (from) conception or from parturition. And if one will attempt to take (the horoscope) from conception, the accurate account of this is incomprehensible, the time (occupied) passing quickly, and naturally (so). For we are not able to say whether conception takes place upon the transference(7) of the seed or not. For this can happen even as quick as thought, just also as leaven, when put into heated jars, immediately is reduced to a glutinous state. But conception can also (take place) after a lapse of duration. For there being an interval

from the mouth of the womb to the fundament, where physicians(8) say conceptions take place, it is altogether the nature of the seed deposited to occupy some time in traversing(9) this interval. The Chaldeans, therefore, being ignorant of the quantity of duration to a nicety, never will comprehend the (moment of) conception; the seed at one time being injected straight forward, and falling at one spot upon actual parts of the womb well disposed for conception, and at another time dropping into it dispersedly, and being collected into one place by uterine energies. Now, while these matters are unknown, (namely), as to when the first takes place, and when the second, and how much time is spent in that particular conception, and how much in this; while, I say, ignorance on these points prevails on the part of these (astrologers), an accurate comprehension of conception is put out of the question.(10) And if, as some natural philosophers have asserted, the seed, remaining stationary first, and undergoing alteration in the womb, then enters the (womb's) opened blood–vessels, as the seeds of the earth(11) sink into the ground; from this it will follow, that those who are not acquainted with the quantity of time occupied by the change, will not be aware of the precise moment of conception either. And, moreover, as women(12) differ from one another in the other parts of the body, both as regards energy and in other respects, so also (it is reasonable to suppose that they differ from one another) in respect of energy of womb, some conceiving quicker, and others slower. And this is not strange, since also women, when themselves compared with themselves, at times are observed having a strong disposition towards conception, but at times with no such tendency. And when this is so, it is impossible to say with accuracy when the deposited seed coalesces, in order that from this time the Chaldeans may fix the horoscope of the birth.

CHAP. IV.—IMPOSSIBILITY OF FIXING THE HOROSCOPE; FAILURE OF AN ATTEMPT TO DO THIS AT THE PERIOD OF BIRTH.

For this reason it is impossible to fix the horoscope from the (period of) conception. But neither can this be done from (that of) birth. For, in the first place, there exists the difficulty as to when it can be declared that there is a birth; whether it is when the foetus begins to incline towards the orifice,(13) or when it may project a little, or when it may be borne to the ground. Neither is it in each of these cases possible to comprehend the precise moment of parturition,(1) or to define the time. For also on account of disposition of soul, and on account of suitableness of body, and on account of choice of the parts, and on account of experience in the midwife, and other endless causes, the time is not the same at which the foetus inclines towards the orifice, when the membranes are ruptured, or when it projects a little, or is deposited on the ground; but the period is different in the case of different individuals. And when the Chaldeans are not able definitely and accurately to calculate this, they will fail, as they ought, to determine the period of emergence.

That, then, the Chaldeans profess to be acquainted with the horoscope at the periods of birth,(1) but in reality do not know it, is evident from these considerations. But that neither is their horoscope infallible, it is easy to conclude. For when they allege that the person sitting beside the woman in travail at the time of parturition gives, by striking a metallic rim, a sign to the Chaldean, who from an elevated place is contemplating the stars, and he, looking towards heaven, marks down the rising zodiacal sign; in the first place, we shall prove to them, that when parturition happens indefinitely, as we have shown a little before, neither is it easy(2) to signify this (birth) by striking the metallic rim. However, grant that the birth is comprehensible, yet neither is it possible to signify this at the exact time; for as the noise of the metallic plate is capable of being divided by a longer time and one protracted, in reference to perception, it happens that the sound is carried to the height (with proportionate delay). And the following proof may be observed in the case of those felling timber at a distance. For a sufficiently long time after the descent of the axe, the sound of the stroke is heard, so that it takes a longer time to reach the listener. And for this reason, therefore, it is not possible for the Chaldeans accurately to take the time of the rising zodiacal sign, and consequently the time when one can make the horoscope with truth. And not only does more time seem to elapse after parturition, when he who is sitting beside the woman in labour strikes the metallic plate, and next after the sound reaches the listener, that is, the person who has gone up to the elevated position; but also, while he is glancing around and looking to ascertain in which of the zodiacal signs is the moon, and in which appears each of the rest of the stars, it necessarily follows that there is a different position in regard of the stars, the

motion(3) of the pole whiffing them on with incalculable velocity, before what is seen in the heavens(4) is carefully adjusted to the moment when the person is born.

CHAP. V.—ANOTHER METHOD OF FIXING THE HOROSCOPE AT BIRTH; EQUALLY FUTILE; USE OF THE CLEPSYDRA IN ASTROLOGY; THE PREDICTIONS OF THE CHALDEANS NOT VERIFIED.

In this way, the art practised by the Chaldeans will be shown to be unstable. Should any one, however, allege that, by questions put to him who inquires from the Chaldeans,(5) the birth can be ascertained, not even by this plan is it possible to arrive at the precise period. For if, supposing any such attention on their part in reference to their art to be on record, even these do not attain—as we have proved –unto accuracy either, how, we ask, can an unsophisticated individual comprehend precisely the time of parturition, in order that the Chaldean acquiring the requisite information from this person may set(6) the horoscope correctly? But neither from the appearance of the horizon will the rising star seem the same everywhere; but in one place its declination will be supposed to be the horoscope, and in another the ascension (will be thought) the horoscope, according as the places come into view, being either lower or higher. Wherefore, also, from this quarter an accurate prediction will not appear, since many may be born throughout the entire world at the same hour, each from a different direction observing the stars.

But the supposed comprehension (of the period of parturition) by means of clepsydras(7) is likewise futile. For the contents of the jar will not flow out in the same time when it is full as when it is half empty; yet, according to their own account, the pole itself by a single impulse is whiffed along at an equable velocity. If, however, evading the argument,(8) they should affirm that they do not take the time precisely, but as it happens in any particular latitude,(9) they will be refuted almost by the sidereal influences themselves. For those who have been born at the same time do not spend the same life, but some, for example, have been made kings, and others have grown old in fetters. There has been born none equal, at all events to Alexander the Macedonian, though many were brought forth along with him throughout the earth; (and) none equal to the philosopher Plato. Wherefore the Chaldean, examining the time of the birth in any particular latitude, will not be able to say accurately, whether a person born at this time will be prosperous. Many, I take it, born at this time, have been unfortunate, so that the similarity according to dispositions is futile.

Having, then, by different reasons and various methods, refuted the ineffectual mode of examination adopted by the Chaldeans, neither shall we omit this, namely, to show that their predictions will eventuate in inexplicable difficulties. For if, as the mathematicians assert, it is necessary that one born under the barb of Sagittarius' arrow should meet with a violent death, how was it that so many myriads of the Barbarians that fought with the Greeks at Marathon or Salamis(1) were simultaneously slaughtered? For unquestionably there was not the same horoscope in the case, at all events, of them all. And again, it is said that one born under the urn of Aquarius will suffer shipwreck: (yet) how is it that so many(2) of the Greeks that returned from Troy were overwhelmed in the deep around the indented shores of Euboea? For it is incredible that all, distant from one another by a long interval of duration, should have been born under the urn of Aquarius. For it is not reasonable to say, that frequently, for one whose fate it was to be destroyed in the sea, all who were with him in the same vessel should perish. For why should the doom of this man subdue the (destinies) of all? Nay, but why, on account of one for whom it was allotted to die on land, should not all be preserved?

CHAP. VI.—ZODIACAL INFLUENCE; ORIGIN OF SIDEREAL NAMES.

But since also they frame an account concerning the action of the zodiacal signs, to which they say the creatures that are procreated are assimilated,(3) neither shall we omit this: as,

for instance, that one born in Leo will De brave; and that one born in Virgo will have long straight hair,(4) be of a fair complexion, childless, modest. These statements, however, and others similar to them, are rather deserving of laughter than serious consideration. For, according to them, it is possible for no AEthiopian to be born in Virgo; otherwise he would allow that such a one is white, with long straight hair and the rest. But I am rather of opinion,(5) that the ancients imposed the names of received animals upon certain specified stars, for the purpose of knowing them better, not from any similarity of nature; for what have the seven stars, distant one from another, in common with a bear, or the five stars with the head of a dragon?—in regard of which Aratus(6) says:—

"But two his temples, and two his eyes, and one beneath Reaches the end of the huge monster's law."

CHAP. VII.—PRACTICAL ABSURDITY OF THE CHALDAIC ART; DEVELOPMENT OF THE ART.

In this manner also, that these points are not deserving so much labour, is evident to those who prefer to think correctly, and do not attend to the bombast of the Chaldeans, who consign monarchs to utter obscurity, by perfecting cowardice(7) in them, and rouse private individuals to dare great exploits. But if any one, surrendering himself to evil, is guilty of delinquency, he who has been thus deceived does not become a teacher to all whom the Chaldeans are disposed to mislead by their mistakes. (Far from it); (these astrologers) impel the minds (of their dupes, as they would have them), into endless perturbation, (when) they affirm that a configuration of the same stars could not return to a similar position, otherwise than by the renewal of the Great Year, through a space of seven thousand seven hundred and seventy and seven years.(8) How then, I ask, will human observation for one birth be able to harmonize with so many ages; and this not once, (but oftentimes, when a destruction of the world, as some have stated, would intercept the progress of this Great Year; or a terrestrial convulsion, though partial, would utterly break the continuity of the historical tradition)?(1) The Chaldaic art must necessarily be refuted by a greater number of arguments, although we have been reminding (our readers) of it on account of other circumstances, not peculiarly on account of the art itself.

Since, however, we have determined to omit none of the opinions advanced by Gentile philosophers, on account of the notorious knavery of the heretics, let us see what they also say who have attempted to propound doctrines concerning magnitudes,—who, observing the fruitless labour of the majority (of speculators), where each after a different fashion coined his own falsehoods and attained celebrity, have ventured to make some greater assertion, in order that they might be highly magnified by those who mightily extol their contemptible lies. These suppose the existence of circles, and measures, and triangles, and squares, both in twofold and threefold array. Their argumentation, however, in regard of this matter, is extensive, yet it is not necessary in reference to the subject which we have taken in hand.

CHAP. VIII.—PRODIGIES OF THE ASTROLOGERS; SYSTEM OF THE ASTRONOMERS; CHALDEAN DOCTRINE OF CIRCLES; DISTANCES OF THE HEAVENLY BODIES.

I reckon it then sufficient to declare the prodigies(2) detailed by these men. Wherefore, employing condensed accounts of what they affirm, I shall turn my attention to the other points(that remain to be considered). Now they make the following statements.(3) The Creator communicated pre—eminent power to the orbital motion of the identical and similar (circle), for He permitted the revolution of it to be one and indivisible; but after dividing this internally into six parts, (and thus having formed) seven unequal circles, according to each interval of a twofold and threefold dimension, He commanded, since there were three of each, that the circles should travel in orbits contrary to one another, three indeed (out of the aggregate of seven) being whirled along with equal velocity, and four of them with a speed dissimilar to each

other and to the remaining three, yet (all) according to a definite principle. For he affirms that the mastery was communicated to the orbital motion of the same (circle), not only since it embraces the motion of the other, that, is, the erratic stars, but because also it possesses so great mastery, that is, so great power, that even it leads round, along with itself, by a peculiar strength of its own, those heavenly bodies—that is, the erratic stars—that are whirled along in contrary directions from west to east, and, in like manner, from east to west.

And he asserts that this motion was allowed to be one and indivisible, in the first place, inasmuch as the revolutions of all the fixed stars were accomplished in equal periods of time, and were not distinguished according to greater or less portions of duration. In the next place, they all present the same phase as that which belongs to the outermost motion; whereas the erratic stars have been distributed into greater and varying periods for the accomplishment of their movements, and into unequal distances from earth. And he asserts that the motion in six parts of the other has been distributed probably into seven circles. For as many as are sections of each (circle)—I allude to monads of the sections(4)—become segments; for example, if the division be by one section, there will be two segments; if by two, three segments; and so, if anything be cut into six parts, there will be seven segments. And he says that the distances of these are alternately arranged both in double and triple order, there being three of each,—a principle which, he has attempted to prove, holds good of the composition of the soul likewise, as depending upon the seven numbers. For among them there are from the monad three double (numbers), viz., 2, 4, 8, and three triple ones, viz., 3, 9, 27. But the diameter of Earth is 80, 108 stadii; and the perimeter of Earth, 250,543 stadii; and the distance also from the surface of the Earth to the lunar circle, Aristarchus the Samian computes at 8,000,178 stadii, but Apollonius 5,000,000, whereas Archimedes computes(5) it at 5,544,1300. And from the lunar to solar circle, (according to the last authority,) are 50,262,065 stadii; and from this to the circle of Venus, 20,272,065 stadii; and from this to the circle of Mercury, 50,817,165 stadii; and from this to the circle of Mars, 40,541,108 stadii; and from this to the circle of Jupiter, 20,275,065 stadii; and from this to the circle of Saturn, 40,372,065 stadii; and from this to the Zodiac and the furthest periphery, 20,082,005 stadii.(1)

CHAP. IX.—FURTHER ASTRONOMIC CALCULATIONS.

The mutual distances of the circles and spheres, and the depths, are rendered by Archimedes. He takes the perimeter of the Zodiac at 447,310,000 stadii; so that it follows that a straight line from the centre of the Earth to the most outward superficies would be the sixth of the aforesaid number, but that the line from the surface of the Earth on which we tread to the Zodiac would be a sixth of the aforesaid number, less by four myriads of stadii, which is the distance from the centre of the Earth to its surface. And from the circle of Saturn to the Earth he says the distance is 2,226,912,711 stadii; and from the circle of Jupiter to Earth, 502,770,646 stadii; and from the circle of Mars to Earth, 132,418,581. From the Sun to Earth, 121,604,454; and from Mercury to the Earth, 526,882,259; and from Venus to Earth, 50,815,160.

CHAP. X.—THEORY OF STELLAR MOTION AND DISTANCE IN ACCORDANCE WITH HARMONY.

Concerning the Moon, however, a statement has been previously made. The distances and profundities of the spheres Archimedes thus renders; but a different declaration regarding them has been made by Hipparchus; and a different one still by Apollonius the mathematician. It is sufficient, however, for us, following the Platonic opinion, to suppose twofold and threefold distances from one another of the erratic stars; for the doctrine is thus preserved of the composition of the universe out of harmony, on concordant principles(2) in keeping with these distances. The numbers, however, advanced by Archimedes,(3) and the accounts rendered by the rest concerning the distances, if they be not on principles of symphony,—that is, the double and triple (distances) spoken of by Plato,—but are discovered independent of harmonies, would not preserve the doctrine of the formation of the universe according to harmony. For it is neither credible nor possible that the distances of these should be both contrary to some reasonable plan, and independent of harmonious and proportional principles, except perhaps only the Moon, on account of wanings and the shadow of the Earth,

in regard also of the distance of which alone—that is, the lunar (planet) from earth—one may trust Archimedes. It will, however, be easy for those who, according to the Platonic dogma itself, adopt this distance to comprehend by numerical calculation (intervals) according to what is double and triple, as Plato requires, and the rest of the distances. If, then, according to Archimedes, the Moon is distant from the surFace of the Earth 5,544,130 stadii, by increasing these numbers double and triple, (it will be) easy to find also the distances of the rest, as if subtracting one part of the number of stadii which the Moon is distant from the Earth.

But because the rest of the numbers—those alleged by Archimedes concerning the distance of the erratic stars—are not based on principles of concord, it is easy to understand—that is, for those who attend to the matter—how the numbers are mutually related, and on what principles they depend. That, however, they should not be in harmony and symphony—I mean those that are parts of the world which consists according to harmony—this is impossible. Since, therefore, the first number which the Moon is distant from the earth is 5,544,130, the second number which the Sun is distant from the Moon being 50,272,065, subsists by a greater computation than ninefold. But the higher number in reference to this, being 20,272,065, is (comprised) in a greater computation than half. The number, however, superior to this, which is 50,817,165, is contained in a greater computation than half. But the number superior to this, which is 40,541,108, is contained in a less computation than two–fifths. But the number superior to this, which is 20,275,065, is contained in a greater computation than half. The final number, however, which is 40,372,065, is comprised in a less computation than double.

CHAP. XI.—THEORY OF THE SIZE OF THE HEAVENLY BODIES IN ACCORDANCE WITH NUMERICAL HARMONIES.

These (numerical) relations, therefore, the greater than ninefold, and less than half, and greater than double, and less than two–fifths, and greater than half, and less than double, are beyond all symphonies, from which not any proportionate or harmonic system could be produced. But the whole world, and the parts of it, are in all respects similarly framed in conformity with proportion and harmony. The proportionate and harmonic relations, however, are preserved—as we have previously stated—by double and triple intervals. If, therefore, we consider Archimedes reliable in the case of only the first distance, that from the Moon to the Earth, it is easy also to find the rest (of the intervals), by multiplying (them) by double and treble. Let then the distance, according to Archimedes, from Earth to Moon be 5,544,130 stadii; there will therefore be the double number of this of stadii which the Sun is distant from the Moon, viz. 11,088,260. But the Sun is distant from the Earth 16,632,390 stadii; and Venus is likewise distant from the Sun 16,632,390 stadii, but from the Earth 33,264,780 stadii; and Mercury is distant from Venus 22,176,520 stadii, but from Earth 55,441,300 stadii; and Mars is distant from Mercury 49,897, 170 stadii, and from Earth 105,338,470 stadii; and Jupiter is distant from Mars 44,353,040 stadii, but from Earth 149,691,510 stadii; Saturn is distant from Jupiter 149,691,510 stadii, but from Earth 299,383,020 stadii.

CHAP. XII.—WASTE OF MENTAL ENERGY IN THE SYSTEMS OF THE ASTROLOGERS.

Who will not feel astonishment at the exertion of so much deep thought with so much toil? This Ptolemy, however—a careful investigator of these matters—does not seem to me to be useless; but only this grieves (one), that being recently born, he could not be of service to the sons of the giants, who, being ignorant of these measures, and supposing that the heights of heaven were near, endeavoured in vain to construct a tower. And so, if at that time he were present to explain to them these measures, they would not have made the daring attempt ineffectually. But if any one profess not to have confidence in this (astronomer's calculations), let him by measuring be persuaded (of their accuracy); for in reference to those incredulous on the point, one cannot have a more manifest proof than this. O, pride of vain—toiling soul, and incredible belief, that Ptolemy should be considered pre—eminently wise among those who have cultivated similar wisdom!

CHAP. XIII.—MENTION OF THE HERETIC COLARBASUS; ALLIANCE BETWEEN HERESY AND THE PYTHAGOREAN PHILOSOPHY.

Certain, adhering partly to these, as if having propounded great conclusions, and supposed things worthy of reason, have framed enormous and endless heresies; and one of these is Colarbasus,(1) who attempts to explain religion by measures and numbers. And others there are (who act) in like manner, whose tenets we shall explain when we commence to speak of what concerns those who give heed to Pythagorean calculation as possible; and uttering vain prophecies, hastily assume(2) as secure the philosophy by numbers and elements. Now certain (speculators), appropriating(3) similar reasonings from these, deceive unsophisticated individuals, alleging themselves endued with foresight;(4) sometimes, after uttering many predictions, happening on a single fulfilment, and not abashed by many failures, but making their boast in this one. Neither shall I pass over the witless philosophy of these men; but, after explaining it, I shall prove that those who attempt to form a system of religion out of these (aforesaid elements), are disciples of a school(5) weak and full of knavery.

CHAP. XIV.—SYSTEM OF THE ARITHMETICIANS; PREDICTIONS THROUGH CALCULATIONS; NUMERICAL ROOTS; TRANSFERENCE OF THESE DOCTRINES TO LETTERS; EXAMPLES IN PARTICULAR NAMES; DIFFERENT METHODS OF CALCULATION; PRESCIENCE POSSIBLE BY THESE.

Those, then, who suppose that they prophesy by means of calculations and numbers, (6) and elements and names, constitute the origin of their attempted system to be as follows. They affirm that there is a root of each of the numbers; in the case of thousands, so many monads as there are thousands: for example, the root of six thousand, six monads; of seven thousand, seven monads; of eight thousand, eight monads; and in the case of the rest, in like manner, according to the same (proportion). And in the case of hundreds, as many hundreds as there are, so many monads are the root of them: for instance, of seven hundred there are seven hundreds; the root of these is seven monads: of six hundred, six hundreds; the root of these, six monads. And it is similar respecting decades: for of eighty (the root is) eight monads; and of sixty, six monads; of forty, four monads; of ten, one monad. And in the case of monads, the monads themselves are a root: for instance, of nine, nine; of eight, eight; of seven, seven. In this way, also, ought we therefore to act in the case of the elements (of words), for each letter has been arranged according to a certain number: for instance, the letter n according to fifty monads; but of fifty monads five is the root, and the root of the letter n is (therefore) five. Grant that from some name we take certain roots of it. For instance, (from) the name Agamemnon, there is of the a, one monad; and of the g, three monads; and of the other a, one monad; of the m, four monads; of the e, five monads; of the m, four monads; of the n, five monads; of the (long) o, eight monads; of the n, five monads; which, brought together into one series, will be 1, 3, 1, 4, 5, 4, 5, 8, 5; and these added together make up 36 monads. Again, they take the roots of these, and they become three in the case of the number thirty, but actually six in the case of the number six. The three and the six, then, added together, constitute nine; but the root of nine is nine: therefore the name Agamemnon terminates in the root nine.

Let us do the same with another name –Hector. The name (H)ector has five letters—e, and k, and t, and o, and r. The roots of these are 5, 2, 3, 8, 1; and these added together make up 19 monads. Again, of the ten the root is one; and of the nine, nine; which added together make up ten: the root of ten is a monad. The name Hector, therefore, when made the subject of computation, has formed a root, namely a monad. It would, however, be easier(1) to conduct the calculation thus: Divide the ascertained roots from the letters—as now in the case of the name Hector we have found nineteen monads—into nine, and treat what remains over as roots. For example, if I divide 19 into 9, the remainder is 1, for 9 times 2 are 18, and there is a remaining monad: for if I subtract 18 from 19, there is a remaining monad; so that the root of the name Hector will be a monad. Again, of the name Patroclus these numbers are roots: 8, 1, 3, 1, 7, 2, 3, 7, 2; added together, they make up 34 monads. And of these the remainder is 7 monads: of the 30, 3; and of the 4, 4. Seven monads, therefore, are the root of the name Patroclus.

Those, then, that conduct their calculations according to the rule of the number nine,(2) take the ninth part of the aggregate number of roots, and define what is left over as the sum of the roots. They, on the other hand, (who conduct their calculations) according to the rule of the number seven, take the seventh (part of the aggregate number of roots); for example, in the case of the name Patroclus, the aggregate in the matter of roots is 34 monads. This divided into seven parts makes four, which (multiplied into each other) are 28. There are six remaining monads; (so that a person using this method) says, according to the rule of the number seven, that six monads are the root of the name Patroclus. If, however, it be 43, (six) taken seven times,(3) he says, are 42, for seven times six are 42, and one is the remainder. A monad, therefore, is the root of the number 43, according to the rule of the number seven. But one ought to observe if the assumed number, when divided, has no remainder; for example, if from any name, after having added together the roots, I find, to give an instance, 36 monads. But the number 36 divided into nine makes exactly 4 enneads; for nine times 4 are 36, and nothing is over. It is

evident, then, that the actual root is 9. And again, dividing the number forty—five, we find nine(4) and nothing over—for nine times five are forty—five, and nothing remains; (wherefore) in the case of such they assert the root itself to be nine. And

as regards the number seven, the case is similar: if, for example we divide 28 into 7, we have nothing over; for seven times four are 28, and nothing remains; (wherefore) they say that seven is the root. But when one computes names, and finds the same letter occurring twice, he calculates it once; for instance, the name Patroclus has the pa twice,(5) and the o twice: they therefore calculate the a once and the a once. According to this, then, the roots will be 8, 1, 3, 1, 7, 2, 3, 2, and added together they make 27 monads; and the root of the name will be, according to the rule of the number nine, nine itself, but according to the rule of the number seven, six.

In like manner, (the name) Sarpedon, when made the subject of calculation, produces as a root, according to the rule of the number nine, two monads. Patroclus, however, produces nine monads; Patroclus gains the victory. For when one number is uneven, but the other even, the uneven number, if it is larger, prevails. But again, when there is an even number, eight, and five an uneven number, the eight prevails, for it is larger. If, however, there were two numbers, for example, both of them even, or both of them odd, the smaller prevails. But how does (the name) Sarpedon, according to the rule of the number nine, make two monads, since the letter (long) o is omitted? For when there may be in a name the letter (long) o and (long) e, they leave out the (long) a, using one letter, because they say both are equipollent; and the same must not be computed twice over, as has been above declared. Again, (the name) Ajax makes four monads; (but the name) Hector, according to the rule of the ninth number, makes one monad. And the tetrad is even, whereas the monad odd. And in the case of such, we say, the greater prevails—Ajax gains the victory. Again, Alexander and Menelaus (may be adduced as examples). Alexander has a proper name (Paris). But Paris, according to the rule of the number nine, makes four monads; and Menelaus, according to the rule of the number nine, makes nine monads. The nine, however, conquer the four (monads): for it has been declared, when the one number is odd and the other even, the greater prevails; but when both are even or both odd, the less (prevails). Again, Amycus and Polydeuces (may be adduced as examples). Amycus, according to the rule of the number nine, makes two monads, and Polydeuces, however, seven: Polydeuces gains the victory. Ajax and Ulysses contended at the funeral games. Ajax, according to the rule of the number nine, makes font monads; Ulysses, according to the rule of the number nine, (makes) eight.(1) Is there, then, not any annexed, and (is there) not a proper name for Ulysses?(2) for he has gained the victory. According to the numbers, no doubt, Ajax is victorious, but history hands down the name of Ulysses as the conqueror, Achilles and Hector (may be adduced as examples). Achilles, according to the rule of the number nine, makes four monads; Hector one: Achilles gains the victory. Again, Achilles and Asteropaeus (are instances). Achilles makes four monads, Asteropaeus three: Achilles conquers. Again, Menelaus and Euphorbus (may be adduced as examples). Menelaus has nine monads, Euphorbus eight: Menelaus gains the victory.

Some, however, according to the rule of the number seven, employ the vowels only, but others distinguish by themselves the vowels, and by themselves the mutes; and, having formed three orders, they take the roots by themselves of the vowels, and by themselves of the semi–vowels, and by themselves of the mutes, and they compare each apart. Others, however, do not employ even these customary numbers, but different ones: for instance, as an example, they no not wish to allow that the letter p has as a root 8 monads, but 5, and that the (letter) x (si) has as a root four monads; and turning in every direction, they discover nothing sound. When, however, they contend about the second (letter), from each name they take away the first letter; but when they contend about the third (letter), they take away two letters of each name, and calculating the rest, compare them.

CHAP. XV.—QUIBBLES OF THE NUMERICAL THEORISTS; THE ART OF THE FRONTISPICISTS (PHYSIOGNOMY); CONNECTION OF THIS ART WITH ASTROLOGY; TYPE OF THOSE BORN UNDER ARIES.

I think that there has been clearly expounded the mind of arithmeticians, who, by means of numbers and of names, suppose that they interpret life. Now I perceive that these, enjoying leisure, and being trained in calculation, have been desirous that, through the art(3) delivered to them from childhood, they, acquiring celebrity, should be styled prophets. And they, measuring the letters up (and) down, have wandered into trifling. For if they fail, they say, in putting forward the difficulty, Perhaps this name was not a family one, but imposed, as also lighting in the instance they argue in the case of (the names) Ulysses and Ajax. Who, taking occasion from this astonishing philosophy, and desirous of being styled "Heresiarch," will not be extolled?

But since, also, there is another more profound art among the all—wise speculators of the Greeks—to whom heretical individuals boast that they attach themselves as disciples, on account of their employing the opinions of these (ancient philosophers) in reference to the doctrines tempted (to be established) by themselves, as shall a little afterwards be proved; but this is an art of divination, by examination of the forehead? or rather, I should say, it is madness: yet we shall not be silent as regards this (system) There are some who ascribe to the stars figures that mould the ideas s and dispositions of men, assigning the reason of this to births (that have taken place) under particular stars; they thus express themselves: Those who(6) are born under Aries will be of the following kind: long head, red hair, contracted eyebrows, pointed forehead, eyes grey and lively,(7) drawn cheeks, long—nosed, expanded nostrils, thin lips, tapering chin, wide month. These, he says, will partake of the following nature: cautious, subtle, perspicuous,(8) prudent, indulgent, gentle, over—auxious, persons of secret resolves fitted for every undertaking, prevailing more by prudence than strength, deriders for the time being, scholars, trustworthy, contentious, quarrellers in a fray, concupiscent, inflamed with unnatural lust, reflective, estranged(1) from their own homes, giving dissatisfaction in everything, accusers, like madmen in their cups, scorners, year by year losing something(2) serviceable in friendship through goodness; they, in the majority of cases, end their days in a foreign land.

CHAP. XVI.—TYPE OF THOSE BORN UNDER TAURUS.

Those, however, who are born in Taurus will be of the following description: round head, thick hair, broad forehead, square eyes, and large black eyebrows; in a white man, thin veins, sanguine, long eyelids, coarse huge ears, round mouths, thick nose, round nostrils, thick lips, strong in the upper parts, formed straight from the legs.(3) The same are by nature pleasing, reflective, of a goodly disposition, devout, just, uncouth, complaisant, labourers from twelve years, quarrelsome, dull. The stomach of these is small, they are quickly filled, forming many designs, prudent, niggardly towards themselves, liberal towards others, beneficent, of a slow(4) body: they are partly sorrowful, heedless as regards friendship, useful on account of mind, unfortunate.

CHAP. XVII.—TYPE OF THOSE BORN UNDER GEMINI.

Those who are born in Gemini will be of the following description: red countenance, size not very large, evenly proportioned limbs,(5) black eyes as if anointed with oil, cheeks turned down,(6) and large mouth, contracted eyebrows; they conquer all things, they retain whatever possessions they acquire,(7) they are extremely rich, penurious, niggardly of what is peculiarly their own, profuse in the pleasures of women,(8) equitable, musical liars. And the same by nature are learned, reflective, inquisitive, arriving at their own decisions, concupiscent, sparing of what belongs to themselves, liberal, quiet, prudent, crafty, they form many designs, calculators, accusers, importunate, not prosperous, they are beloved by the fair sex, merchants; as regards friendship, not to any considerable extent useful.

CHAP. XVIII.—TYPE OF THOSE BORN UNDER CANCER.

Those born in Cancer are of the following description: size not large, hair like a dog, of a reddish colour, small mouth, round head, pointed forehead, grey eyes, sufficiently beautiful, limbs somewhat varying. The same by nature are wicked, crafty, proficients in plans, insatiable, stingy, ungracious, illiberal, useless, forgetful; they neither restore what is another's, nor do they ask back what is their own;(9) as regards friendship, useful.

CHAP. XIX.—TYPE OF THOSE BORN UNDER LEO.

Those born in Leo are of the following description: round head, reddish hair, huge wrinkled forehead, coarse ears, large development of neck, partly bald, red complexion, grey eyes, large jaws, coarse mouth, gross in the upper parts,(10) huge breast, the under limbs tapering. The same are by nature persons who allow nothing to interfere with their own decision, pleasing themselves, irascible, passionate, scorners, obstinate, forming no design, not loquacious,(11) indolent, making an improper use of leisure, familiar,(12) wholly abandoned to pleasures of women, adulterers, immodest, in faith untrue, importunate, daring, penurious, spoliators, remarkable; as regards fellowship, useful; as regards friendship,(13) useless.

CHAP. XX.—TYPE OF THOSE BORN UNDER VIRGO.

Those born in Virgo are of the following description: fair appearance, eyes not large, fascinating, dark, compact(14) eyebrows, cheerful, swimmers; they are, however, slight in frame,(15) beautiful in aspect, with hair prettily adjusted, large forehead, prominent nose. The same by nature are docile, moderate, intelligent, sportive, rational, slow to speak, forming many plans; in regard of a favour, importunate;(16) gladly observing everything; and well—disposed pupils, they master whatever they learn; moderate, scorners, victims of unnatural lusts, companionable, of a noble soul, despisers, careless in practical matters, attending to instruction, more honourable in what concerns others than what relates to themselves; as regards friendship, useful.

CHAP. XXI.—TYPE OR THOSE BORN UNDER LIBRA.

Those born in Libra will be of the following description: hair thin, drooping, reddish and longish, forehead pointed (and) wrinkled, fair compact eyebrows, beautiful eyes, dark pupils, long thin ears, head inclined, wide mouth. The same by nature are intelligent, God–fearing, communicative to one another,(1) traders, toilers, not retaining gain, liars, not of an amiable disposition, in business or principle true, free–spoken, beneficent, illiterate, deceivers, friendly, careless, (to whom it is not profitable to do any act of injustice);(2) they are scorners, scoffers, satirical,(3) illustrious, listeners, and nothing succeeds with these; as regards friendship, useful.

CHAP. XXII.—TYPE OF THOSE BORN UNDER SCORPIO.

Those born in Scorpio are of the following description: a maidenish countenance, comely, pungent, blackish hair, well—shaped eyes, forehead not broad, and sharp nostril, small contracted ears, wrinkled foreheads, narrow eyebrows, drawn cheeks. The same by nature are crafty, sedulous, liars, communicating their particular designs to no one, of a deceitful spirit, wicked, scorners, victims to adultery, well—grown, docile; as regards friendship, useless.

CHAP. XXIII.—TYPE OF THOSE BORN UNDER SAGITTARIUS.

Those born in Sagittarius will be of the following description: great length, square forehead. profuse eyebrows, indicative of strength, well-arranged projection of hair, reddish (in complexion). The same by nature are gracious, as educated persons, simple, beneficent; given to unnatural lusts, companionable, toil-worn, lovers, beloved, jovial in their cups, clean, passionate, careless, wicked; as regards friendship, useless; scorners, with noble souls, insolent, crafty; for fellowship, useful.

CHAP. XXIV.—TYPE OF THOSE BORN UNDER CAPRICORN.

Those born in Capricorn will be of the following description: reddish body, projection of greyish hair, round mouth,(4) eyes as of an eagle, contracted brows, open forehead, somewhat bald, in the upper parts of the body endued with more strength. The same by nature are philosophic, scorners, and scoffers at the existing state of things, passionate, persons that can make concessions, honourable, beneficent, lovers of the practice of music, passionate in their cups, mirthful, familiar, talkative, given to unnatural lusts, genial, amiable, quarrelsome e lovers, for fellowship well disposed.

CHAP. XXV.—TYPE OF THOSE BORN UNDER AQUARIUS.

Those born in Aquarius will be of the following description: square in size, of a diminutive body; sharp, small, fierce eyes; imperious, ungenial, severe, readily making acquisitions, for friendship and fellowship well disposed; moreover, for maritime(5) enterprises they make voyages, and perish. The same by nature are taciturn, modest, sociable, adulterers, penurious, practised in business,(6) tumultuous, pure, well–disposed, honourable, large eyebrows; frequently they are born in the midst of trifling events, but (in after life) follow a different pursuit; though they may have shown kindness to any one, still no one returns them thanks.

CHAP. XXVI.—TYPE OF THOSE BORN UNDER PISCES.

Those born in Pisces will be of the following description: of moderate dimensions, pointed forehead like fishes, shaggy hair, frequently they become soon grey. The same by nature are of exalted soul, simple, passionate, penurious, talkative; in the first period of life they will be drowsy; they are desirous of managing business by themselves, of high repute, venturesome, emulous, accusers, changing their locality, lovers, dancers; for friendship, useful.

CHAP. XXVII.—FUTILITY OF THIS THEORY OF STELLAR INFLUENCE.

Since, therefore, we have explained the astonishing wisdom of these men, and have not concealed their overwrought art of divination by means of contemplation, neither shall I be silent as regards (undertakings) in the case of which those that are deceived act foolishly. For, comparing the forms and dispositions of men with names of stars, how impotent their system is! For we know that those originally conversant with such investigations have called the stars by names given in reference to propriety of signification and facility for future recognition. For what similarity is there of these (heavenly bodies) with the likeness of animals, or what community of nature as regards conduct anti energy (is there ill the two cases), that one should allege that a person born in Leo should be irascible, and one born in Virgo moderate, or one born in Cancer wicked, but that those born in...

CHAP. XXVIII.(1)—SYSTEM OF THE MAGICIANS; INCANTATIONS OF DEMONS; SECRET MAGICAL RITES.

... And (the sorcerer), taking (a paper), directs the inquirer (2) to write down with water whatever questions he may desire to have asked from the demons. Then, folding up the paper, and delivering it to the attendant, he sends him away to commit it to the flames, that the ascending smoke may waft the letters to demons. While, however, the attendant is executing this order, (the sorcerer) first removes equal portions of the paper, and on some more parts of it he pretends that demons write in Hebrew characters. Then burning an incense of the Egyptian magicians, termed Cyphi, he takes these (portions of paper) away, and places them near the incense. But (that paper) which the inquirer happens to have written (upon), having placed on the coals, he has burned. Then (the sorcerer), appearing to be borne away under divine influence, (and) hurrying into a corner (of the house), utters a loud and harsh cry, and unintelligible to all, ... and orders all those present to enter, crying out (at the same time), and invoking Phryn, or some other demon. But after passing into the house, and when those that were present stood side by side, the sorcerer, flinging the attendant upon a bed,(3) utters to him several words, partly in the Greek, and partly, as it were, the Hebrew language, (embodying) the customary incantations employed by the magicians. (The attendant), however, goes away(4) to make the inquiry. And within (the house), into a vessel full of water (the sorcerer) infusing copperas mixture, and melting the drug, having with it sprinkled the paper that forsooth had (the characters upon it) obliterated, he forces the latent and concealed letters to come once more into light; and by these he ascertains what the inquirer has written down. And if one write with copperas mixture likewise, and having ground a gall nut, use its vapour as a fumigator, the concealed letters would become plain. And if one write with milk, (and) then scorch the paper, and scraping it, sprinkle and rub (what is thus scraped off) upon the letters traced with the milk, these will become plain. And urine likewise, and sauce of brine, and juice of euphorbia, and of a fig, produce a similar result. But when

(the sorcerer) has ascertained the question in this mode, he makes provision for the manner in which be ought to give the reply. And next he orders those that are present to enter, holding laurel branches and shaking them, and uttering cries, and invoking the demon Phryn. For also it becomes these to invoke him;(5) and it is worthy that they make this request from demons, which they do not wish of themselves to put forward, having lost their minds. The confused noise, however, and the tumult, prevent them directing attention to those things which it is supposed (the sorcerer) does in secret. But what these are, the present is a fair opportunity for us to declare.

Considerable darkness, then, prevails. For the (sorcerer) affirms that it is impossible for mortal nature to behold divine things, for that to hold converse (with these mysteries) is sufficient. Making, however, the attendant lie down (upon the couch), head foremost, and placing by each side two of those little tablets, upon which had been inscribed in, forsooth, Hebrew characters, as it were names of demons, he says that (a demon) will deposit the rest in their ears. But this (statement) is requisite, in order that some instrument may be placed beside the ears of the attendant, by which it is possible that he signify everything which he chooses. First, however, he produces a sound that the (attendant) youth may be terrified; and secondly, he makes a humming noise; then, thirdly, he speaks(6) through the instrument what he wishes the youth to say, and remains in expectation of the issue of the affair; next, he makes those present remain still, and directs the (attendant) to signify, what he has heard from the demons. But the instrument that is placed beside his ears is a natural instrument, viz., the windpipe of long-necked cranes, or storks, or swans. And if none of these is at hand, there are also some different artificial instruments (employed); for certain pipes of brass, ten in number, (and) fitting into one another, terminating in a narrow point, are adapted (for the purpose), and through these is spoken into the ear whatsoever the (magician) wishes. And the youth hearing these (words) with terror as uttered by demons, when ordered, speaks them out. If any one, however, putting around a stick a moist hide, and having dried it and drawn it together, close it up, and by removing the rod fashion the hide into the form of a pipe, he attains a similar end. Should any of these, however, be not at hand, he takes a book, and, opening it inside, stretches it out as far as he think requisite, (and thus) achieves the same result.

But if he knows beforehand that one is present who is about to ask a question, he is the more ready for all

(contingencies). If, however, he may also previously ascertain the question, he writes (it) with the drug, and, as being prepared, he is considered(1) more skilful, on account of having clearly written out what is (about) being asked. If, however, he is ignorant of the question, he forms conjectures, and puts forth something capable of a doubtful and varied interpretation, in order that the oracular response, being originally unintelligible, may serve for numerous purposes, and in the issue of events the prediction may be considered correspondent with what actually occurs. Next, having filled a vessel with water, he puts down (into it) the paper, as if uninscribed, at the same time infusing along with it copperas mixture. For in this way the paper written upon floats(2) upwards (to the surface), bearing the response. Accordingly there ensue frequently to the attendant formidable fancies for also he strikes blows plentifully on the terrified (bystanders). For, casting incense into the fire, he again operates after the following method. Covering a lump of what are called "fossil salts" with Etruscan wax, and dividing the piece itself of incense into two parts, he throws in a grain of salt; and again joining (the piece) together, and placing it on the burning coals, he leaves it there. And when this is consumed, the salts, bounding upwards, create the impression of, as it were, a strange vision taking place. And the dark-blue dye which has been deposited in the incense produces a blood-red flame, as we have already declared. But (the sorcerer) makes a scarlet liquid, by mixing wax with alkanet, and, as I said, depositing the wax in the incense. And he makes the coals(3) be moved, placing underneath powdered alum; and when this is dissolved and swells up like bubbles, the coals are moved.

CHAP. XXIX.—DISPLAY OF DIFFERENT EGGS.

But different eggs they display after this manner. Perforating the top at both ends, and extracting the white, (and) having again dipped it, throw in some minium and some writing ink. Close, however, the openings with refined scrapings of the eggs, smearing them with fig—juice.

CHAP. XXX.—SELF-SLAUGHTER OF SHEEP.

By those who cause sheep to cut off their own heads, the following plan is adopted. Secretly smearing the throat (of the animal) with a cauterizing drug, he places a sword near, and leaves it there.(4) The sheep, desirous of scratching himself, rushes against the blade, and in the act of rubbing is slaughtered, while the head is almost severed from the trunk. There is, however, a compound of the drug, bryony and salt and squills, made up in equal parts. In order that the person bringing the drug may escape notice, he carries a box with two compartments constructed of horn, the visible one of which contains frankincense, but the secret one (the aforesaid) drug. He, however, likewise insinuates into the ears of the sheep about to meet death quicksilver; but this is a poisonous drug.

CHAP. XXXI.—METHOD OF POISONING GOATS.

And if one smear(5) the ears of goats over with cerate, they say that they expire a little afterwards, by having their breathing obstructed. For this to them is the way—as these affirm—of their drawing their breath in an act of respiration. And a ram, they assert, dies,(6) if one bends back (its neck)(7) opposite the sun. And they accomplish the burning of a house, by daubing it over with the juice of a certain fish called dactylus. And this effect, which it has by reason of the sea—water, is very useful. Likewise foam of the ocean is boiled in an earthen jar along with some sweet ingredients; and if you apply a lighted candle to this while in a seething state, it catches the fire and is consumed; and (yet though the mixture) be poured upon the head, it does not bum it at all. If, however, you also smear it over with heated resin,(8) it is consumed far more effectually. But he accomplishes his object better still, if also he takes some sulphur.

CHAP. XXXII.—IMITATIONS OF THUNDER, AND OTHER ILLUSIONS.

Thunder is produced in many ways; for stones very numerous and unusually large, being rolled downwards along wooden planks, fall upon plates of brass, and cause a sound similar to thunder. And also around the thin plank with which carders thicken cloth, they coil a thin rope; and then drawing away the cord with a whiff, they spin the plank round, and in its revolution it emits a sound like thunder. These farces, verily, are played off thus.

There are, however, other practices which I shall explain, which those who execute these ludicrous performances estimate as great exploits. Placing a cauldron full of pitch upon burning coals, when it boils up, (though) laying their hands down upon it, they are not burned; nay, even while walking on coals of fire with naked feet, they are not scorched. But also setting a pyramid of stone on a hearth, (the sorcerer) makes it get on fire, and from the mouth it disgorges a volume of smoke, and that of a fiery description. Then also putting a linen cloth upon a pot of water, throwing on (at the same time) a quantity of blazing coals, (the magician) keeps the linen cloth unconsumed. Creating also darkness in the house, (the sorcerer) alleges that he can introduce gods or demons; and if any requires him to show AEsculapius, he uses an invocation couched in the following words:—

"The child once slain, again of Phoebus deathless made I call to come, and aid my sacrificial rites; Who, also, once the countless tribes of fleeting dead, In ever—mournful homes of Tartarus wide, The fatal billow breasting, and the inky(1) flood Surmounting, where all of mortal mould must float, Torn, beside the lake, with endless(2) grief and woe, Thyself didst snatch from gloomy Proserpine. Or whether the seat of Holy Thrace thou haunt, or lovely Pergamos, or besides Ionian Epidaurus, The chief of seers, O happy God, invites thee here."

CHAP. XXXIII.—THE BURNING AESCULAPIUS; TRICKS WITH FIRE.

But after he discontinues uttering these jests, a fiery AEsculapius(3) appears upon the floor. Then, placing in the midst a pot full of water, he invokes all the deities, and they are present. For any one who is by, glancing into the pot, will behold them all, and Diana leading on her baying hounds. We shall not, however, shrink from narrating the account (of the devices) of these men, how they attempt (to accomplish their jugglery). For (the magician) lays his hand upon the cauldron of pitch,(4) which is in, as it were, a boiling state; and throwing in (at the same time) vinegar and nitre and moist pitch, he kindles a fire beneath the cauldron. The vinegar, however, being mixed along with the nitre, on receiving a small accession of heat, moves the pitch, so as to cause bubbles to rise to the surface, and afford the mere semblance of a seething (pot). The (sorcerer), however, previously washes his hands frequently in brine; the consequence being, that the contents of the cauldron do not in any wise, though in reality

boiling, burn him very much. But if, having smeared his hands with a tincture of myrtle(5) and nitre and myrrh, along with vinegar, he wash them in brine frequently, he is not scorched: and he does not burn his feet, provided he smear them with isinglass and a salamander.

As regards, however, the burning like a taper of the pyramid, though composed of stone, the cause of this is the following. Chalky earth is fashioned into the shape of a pyramid, but its colour is that of a milk—white stone, and it is prepared after this fashion. Having anointed the piece of clay with plenty of oil, and put it upon coals, and baked it, by smearing it afresh, and scorching it a second and third time, and frequently, (the sorcerer) contrives that it can be burned, even though he should plunge it in water; for it contains in itself abundance of oil. The hearth, however, is spontaneously kindled, while the magician pours out(6) a libation, by having time instead of ashes burning underneath, and refined frankincense and a large quantity of tow,(7) and a bundle(8) of anointed tapers and of gall nuts, hollow within, and supplied with (concealed) fire. And after some delay, (the sorcerer) makes (the pyramid) emit smoke from the mouth, by both putting fire in the gall nut, and encircling it with tow, and blowing into the mouth. The linen cloth, however, that has been placed round the cauldron, (and) on which he deposits the coals, on account of the underlying brine, would not be burned; besides, that it has itself been washed in brine, and then smeared with the white of an egg, along with moist alum. And if, likewise, one mix in these the juice of house—leek along with vinegar, and for a long time previously smear it (with this preparation), after being washed in this drug, it continues altogether fire—proof.

CHAP.XXXIV.—THE ILLUSION OF THE SEALED LETTERS;OBJECT IN DETAILING THESE JUGGLERIES.

After, then,(9) we have succinctly explained the powers of the secret arts practised among these (magicians), and have shown their easy plan for the acquisition of knowledge,(10) neither are we disposed to be silent on the following point, which is a necessary one,—how that, loosing the seals, they restore the sealed letters, with the actual seals themselves. Melting pitch, resin, and sulphur, and moreover asphalt, in equal parts, (and) forming the ointment into a figure, they keep it by them. When, however, it is time to loose a small tablet, smearing with oil their tongue, next with the latter anointing the seal, (and) heating the drug with a moderate fire, (the sorcerers) place it upon the seal; and they leave it there until it has acquired complete consistence, and they use it in this condition as a seal. But they say, likewise, that wax itself with fir—wood gum possesses a similar potency, as well as two parts of mastich with one part of dry asphalt. But sulphur also by itself effects the purpose tolerably well, and flower of gypsum strained with water, and of gum. Now this (last mixture) certainly answers most admirably also for sealing molten lead. And that which is accomplished by the Tuscan wax, and refuse(1) of resin, and pitch, and asphalt, and mastich, and powdered spar, all being boiled together in equal parts, is superior to the rest of the drugs which I have mentioned, while that which is effected by the gum is not inferior. In this manner, then, also, they attempt to loose the seals, endeavouring to learn the letters written within.

These contrivances, however, I hesitated to narrate(2) in this book, perceiving the danger lest, perchance, any knavish person, taking Occasion (from my account), should attempt (to practise these juggleries). Solicitude, however, for many young persons, who could be preserved from such practices, has persuaded me to teach and publish, for security's sake, (the foregoing statements). For although one person may make use of these for gaining instruction in evil, in this way somebody else will, by being instructed (in these practices), be preserved from them. And the magicians themselves, corrupters of life, will be ashamed in plying their art. And learning these points that have been previously elucidated(3) by us, they will possibly be restrained from their folly. But that this seal may not be broken, let me seal it with hog's lard and hair mixed with wax.(4)

CHAP. XXXV.—THE DIVINATION BY A CAULDRON; ILLUSION OF FIERY DEMONS; SPECIMEN OF A MAGICAL INVOCATION.

But neither shall I be silent respecting that piece of knavery of these (sorcerers), which consists in the divination by means of the cauldron. For, making a closed chamber, and anointing the ceiling with cyanus for present use, (5) they introduce certain vessels of cyanus, (6) and stretch them upwards. The cauldron, however, full of water, is placed in the middle on the ground; and the reflection of the cyanus falling upon it, presents the appearance of heaven. But the floor also has a certain concealed aperture, on which the cauldron is laid, having been (previously, supplied with a bottom of crystal, while itself is composed of stone.(7) Underneath, however, unnoticed (by the spectators), is a compartment, into which the accomplices, assembling, appear invested with the figures of such gods and demons as the magician wishes to exhibit. Now the dupe, beholding these, becomes astonished at the knavery of the magician, and subsequently believes all things that are likely to be stated by him. But (the sorcerer) produces a burning demon, by tracing on the wall whatever figure he wishes, and then covertly smearing it with a drug mixed according to this manner, viz., of Laconian(8) and Zacynthian asphalt,—while next, as if under the influence of prophetic frenzy, he moves the lamp towards the wall. The drug, however, is burned with considerable splendour. And that a fiery Hecate seems to career through air, he contrives in the mode following. Concealing a certain accomplice in a place which he wishes, (and) taking aside his dupes, he persuades them (to believe himself), alleging that he will exhibit a flaming demon riding through the air. Now he exhorts them immediately to keep their eyes fixed until they see the flame in the air, and that (then), veiling themselves, they should fall on their face until he himself should call them; and after having given them these instructions, he, on a moonless night, in verses speaks thus:—

"Infernal, and earthy, and supernal Bombo, come! Saint of streets, and brilliant one, that strays by night; Foe of radiance, but friend and mate of gloom; In howl of dogs rejoicing, and in crimson gore, Wading 'mid corpses through tombs of lifeless dust, Panting for blood; with fear convulsing men. Gorgo, and Mormo, and Luna,(9) and of many shapes, Come, propitious, to our sacrificial rites!"

CHAP. XXXVI.—MODE OF MANAGING AN APPARITION.

And while speaking these words, fire is seen borne through the air; but the (spectators) being horrified at the strange apparition, (and) cover—ing their eyes, fling themselves speechless to earth. But the success of the artifice is enhanced by the following contrivance. The accomplice whom I have spoken of as being concealed, when he hears the incantation ceasing, holding a kite or hawk enveloped with tow, sets fire to it and releases it. The bird, however, frightened by the flame, is borne aloft, and makes a (proportionably) quicker flight, which these deluded persons beholding, conceal themselves, as if they had seen something divine. The winged creature, however, being whirled round by the fire, is borne whithersoever chance may have it, and burns now the houses, and now the courtyards. Such is the divination of the sorcerers.

CHAP. XXXVII.—ILLUSIVE APPEARANCE OF THE MOON.

And they make moon and stars appear on the ceiling after this manner. In the central part of the ceiling, having fastened a mirror, placing a dish full of water equally (with the mirror) in the central portion of the floor, and setting in a central place likewise a candle, emitting a faint light from a higher position than the dish,—in this way, by reflection, (the magician) causes the moon to appear by the mirror. But frequently, also, they suspend on high from the ceiling, at a distance, a drum,(1) but which, being covered with some garment, is concealed by the accomplice, in order that (the heavenly body) may not appear before the (proper) time. And afterwards placing a candle (within the drum), when the magician gives the signal to the accomplice, he removes so much of the covering as may be sufficient for effecting an imitation representing the figure of the moon as it is at that particular time. He smears, however, the luminous parts of the drum with cinnabar and gum;(2) and having pared around the neck and bottom of a flagon(3) of glass ready behind, he puts a candle in it, and places around it some of the requisite contrivances for making the figures shine, which some one of the accomplices has concealed on high; and on receiving the signal, he throws down from above the contrivances, so to make the moon appear descending from the sky.

And the same result is achieved by means of a jar in sylvan localities.(4) For it is by means of a jar that the tricks in a house are performed. For having set up an altar, subsequently is (placed

upon it) the jar, having a lighted lamp; when, however, there are a greater number of lamps, no such sight is displayed. After then the enchanter invokes the moon, he orders all the lights to be extinguished, yet that one be left faintly burning; and then the light, that which streams from the jar, is reflected on the ceiling, and furnishes to those present a representation of the moon; the mouth of the jar being kept covered for the time which it would seem to require, in order that the representation of full moon should be exhibited on the ceiling.

CHAP. XXXVIII.—ILLUSIVE APPEARANCE OF THE STARS.

But the scales of fishes—for instance, the seahorse—cause the stars to appear to be; the scales being steeped in a mixture of water and gum, and fastened on the ceiling at intervals.

CHAP. XXXIX.—IMITATION OF AN EARTHQUAKE.

The sensation of an earthquake they	cause in such a	way, as that	all things seem	set in motion;	ordure of a
weasel burned with a magnet upon coals	(has this effect	t).(5)			

CHAP. XL.—TRICK WITH THE LIVER.

And they exhibit a liver seemingly bearing an inscription in this manner. With the left hand he writes what he wishes, appending it to the question, and the letters are traced with gall juice and strong vinegar. Then taking up the liver, retaining it in the left hand, he makes some delay, and then it draws away the impression, and it is supposed to have, as it were, writing upon it.

CHAP. XLI.—MAKING A SKULL SPEAK.

But putting a skull on the ground, they make it speak in this manner. The skull itself is made out of the caul of an ox;(6) and when fashioned into the requisite figure, by means of Etruscan wax and prepared gum,(7) (and) when this membrane is placed around, it presents the appearance of a skull, which seems to all(8) to speak when the contrivance operates; in the same manner as we have explained in the case of the (attendant) youths, when, having procured the windpipe of a crane,(9) or some such long—necked animal, and attaching it covertly to the skull, the accomplice utters what he wishes. And when he desires (the skull) to become invisible, he appears as if burning incense, placing around, (for this purpose,) a quantity of coals; and when the wax catches the heat of these, it melts, and in this way the skull is supposed to become invisible.

CHAP. XLII.—THE FRAUD OF THE FOREGOING PRACTICES; THEIR CONNECTION WITH HERESY.

These are the deeds of the magicians,(1) and innumerable other such (tricks) there are which work on the credulity of the dupes, by fair balanced words, and the appearance of plausible acts. And the heresiarchs, astonished at the art of these (sorcerers), have imitated them, partly by delivering their doctrines in secrecy and darkness, and partly by advancing (these tenets) as their own. For this reason, being desirous of warning the multitude, we have been the more painstaking, in order not to omit any expedient(2) practised by the magicians, for those who may be disposed to be deceived. We have been however drawn, not unreasonably, into a detail of some of the secret (mysteries) of the sorcerers, which are not very requisite, to be sure, in reference to the subject taken in hand; yet, for the purpose of guarding against the villanous and incoherent art of magicians, may be supposed useful. Since, therefore, as far as delineation is feasible, we have explained the opinions of all (speculators), exerting especial attention towards the elucidation of the opinions introduced as novelties by the heresiarchs; (opinions) which, as far as piety is concerned, are futile and spurious, and which are not, even among themselves, perhaps(3) deemed worthy of serious consideration. (Having pursued this course of inquiry), it seems expedient that, by means of a compendious discourse, we should recall to the (reader's) memory statements that have been previously made.

CHAP. XLIII.—RECAPITULATION OF THEOLOGIES AND COSMOGONIES; SYSTEM OF THE PERSIANS; OF THE BABYLONIANS; THE EGYPTIAN NOTION OF DEITY; THEIR THEOLOGY BASED ON A THEORY OF NUMBERS; THEIR SYSTEM OF COSMOGONY.

Among all those who throughout the earth, as philosophers and theologians, have carried on investigations, has prevailed diversity of opinion(4) concerning the Deity, as to His essence or nature. For some affirm Him to be fire, and some spirit, and some water, while others say that He is earth. And each of the elements labours under some deficiency, and one is worsted by the other. To the wise men of the world, this, however, has occurred, which is obvious to persons possessing intelligence; (I mean) that, beholding the stupendous works of creation, they were confused respecting the substance of existing things, supposing that these were too vast to admit of deriving generation from another, and at the same time (asserting) that neither the universe itself is God. As far as theology was concerned, they declared, however, a single cause for things that fall under the cognizance of vision, each supposing the cause which he adjudged the most reasonable; and so, when gazing on the objects made by God, and on those which are the most insignificant in comparison with His overpowering majesty, not, however, being able to extend the mind to the magnitude of God as He really is, they deified these (works of the external world).

But the Persians,(5) supposing that they had penetrated more within the confines of the truth, asserted that the Deity is luminous, a light contained in air. The Babylonians, however, affirmed that the Deity is dark, which very opinion also appears the consequence of the other; for day follows night, and night day. Do not the Egyptians, however,(6) who suppose themselves more ancient than all, speak of the power of the Deity? (This power they estimate by) calculating these intervals of the parts (of the zodiac; and, as if) by a most divine inspiration,(7) they asserted that the Deity is an indivisible monad, both itself generating itself, and that out of this were formed all things. For this, say they,(8) being unbegotten, produces the succeeding numbers; for instance, the monad, superadded into itself, generates the duad; and in like manner, when superadded (into duad, triad, and so forth), produces the triad and tetrad, up to the decade, which is the beginning and end of numbers. Wherefore it is that the first and tenth monad is generated, on account of the decade being equipollent, and being reckoned for a monad, and (because) this multiplied ten times will become a hundred, and again becomes a monad, and the hundred multiplied ten times will produce a thousand, and this will be a monad. In this manner also the thousand multiplied ten times make up the full sum of a myriad; in like manner will it be a monad. But by a comparison of indivisible quantities, the kindred numbers of the monad comprehend 3, 5, 7, 9.(1)

There is also, however, a more natural relation of a different number to the monad, according to the arrangement of the orbit of six days' duration,(2) (that is), of the duad, according to the position and division of even numbers. But the kindred number is 4 and 8. These, however, taking from the monad of the numbers(3) an idea of virtue, progressed up to the four elements; (I allude), of course, to spirit, and fire, and water, and earth. And out of these having made the world, (God) framed it an ermaphrodite, and allocated two elements for the upper hemisphere, namely spirit and fire; and this is styled the hemisphere of the monad, (a hemisphere) beneficent, and ascending, and masculine. For, being composed of small particles, the monad soars into the most rarified and purest part of the atmosphere; and the other two elements, earth and water, being more gross, he assigned to the duad; and this is termed the descending hemisphere, both feminine and mischievous. And likewise, again, the upper elements themselves, when compared one with another, comprise in one another both male and female for fruitfulness and increase of the whole creation. And the fire is masculine, and the spirit feminine. And again the water is masculine, and the earth feminine. And so from the beginning fire consorted with spirit, and water with earth. For as the power of spirit is fire, so also that of earth is water;(4) ... and the elements themselves, when computed and resolved by subtraction of enneads, terminate properly, some of them in the masculine number, and others of them in the feminine. And, again, the ennead is subtracted for this cause, because the three hundred and sixty parts of the entire (circle) consist of enneads, and for this reason the four regions of the world are circumscribed by ninety perfect parts. And light has been appropriated to the monad, and

darkness

to the duad, and life to light, according to nature, and death to the duad. And to life (has been appropriated) justice; and to death, injustice. Wherefore everything generated among masculine numbers is beneficent, while that (produced) among feminine (numbers) is mischievous. For instance, they pursue their calculations thus: monad—that we may commence from this—becomes 361, which (numbers) terminate in a monad by the subtraction of the ennead. In like manner, reckon thus: Duad becomes 605; take away the enneads, it ends in a duad, and each reverts into its own peculiar (function).

CHAP. XLIV.—EGYPTIAN THEORY OF NATURE; THEIR AMULETS.

For the monad, therefore, as being beneficent, they assert that there are consequently(5) names ascending, and beneficent, and masculine, and carefully observed, terminating in an uneven number;(6) whereas that those terminating in the even number have been supposed to be both descending, and feminine and malicious. For they affirm that nature is made up of contraries, namely bad and good, as right and left, light and darkness, night and day, life and death. And moreover they make this assertion, that they have calculated the word "Deity," (and found that it reverts into a pentad with an ennead subtracted). Now this name is an even number, and when it is written down (on some material) they attach it to the body, and accomplish cures(7) by it. In this manner, likewise, a certain herb, terminating in this number, being similarly fastened around (the frame), operates by reason of a similar calculation of the number. Nay, even a doctor cures sickly people by a similar calculation. If, however, the calculation is contrary, it does not heal with facility.(8) Persons attending to these numbers reckon as many as are homogeneous according to this principle; some, however, according to vowels alone; whereas others according to the entire number. Such also is the wisdom of the Egyptians, by which, as they boast, they suppose that they cognise the divine nature.

CHAP. XLV.—USE OF THE FOREGOING DISCUSSIONS,

It appears, then, that these speculations also have been sufficiently explained by us. But since I think that I have omitted no opinion found in this earthly and grovelling Wisdom, I perceive that the solicitude expended by us on these subjects has not been useless. For we observe that our discourse has been serviceable not only for a refutation of heresies, but also in reference to those who entertain these opinions. Now these, when they encounter the extreme care evinced by us, will even be struck with admiration of our earnestness, and will not despise our industry and condemn Christians as fools when they discern the opinions to which they themselves have stupidly accorded their belief. And furthermore, those who, desirous of learning, addict themselves to the truth, will be assisted by our discourse to become, when they have learned the fundamental principles of the heresies, more intelligent not only for the easy refutation of those who have attempted to deceive them, but that also, when they have ascertained the avowed opinions of the wise men, and have been made acquainted with them, that they shall neither be confused by them as ignorant persons would, nor become the dupes of certain individuals acting as if from some authority; nay, more than this, they shall be on their guard against those that are allowing themselves to become victims to these delusions.

CHAP. XLVI.—THE ASTROTHEOSOPHISTS; ARATUS IMITATED BY THE HERESIARCHS; HIS SYSTEM OF THE DISPOSITION OF THE STARS.

Having sufficiently explained these opinions, let us next pass on to a consideration of the subject taken in hand, in order that, by proving what we have determined concerning heresies, and by compelling their (champions) to return to these several (speculators) their peculiar tenets, we may show the heresiarchs destitute (of a system); and by proclaiming the folly of those who are persuaded (by these heterodox tenets), we shall prevail on them to retrace their course to the serene haven of the truth. In order, however, that the statements about to follow may seem more clear to the readers, it is expedient also to declare the opinions advanced by Aratus concerning the disposition of the stars of the heavens. (And this is necessary), inasmuch as some persons, assimilating these (doctrines) to those declared by the Scriptures, convert (the holy writings) into allegories, and endeavour to seduce the mind of those who give heed to their (tenets), drawing them on by plausible words into the admission of whatever opinions they wish, (and) exhibiting a strange marvel, as if the assertions made by them were fixed among the stars. They, however, gazing intently on the very extraordinary wonder, admirers as they are of trifles, are fascinated like a bird called the owl, which example it is proper to mention, on account of the statements that are about to follow. The animal (I speak of) is, however, not

very different from an eagle, either in size or figure, and it is captured in the following way:—The hunter of these birds, when he sees a flock of them lighting anywhere, shaking his hands, at a distance pretends to dance, and so by little and little draws near the birds. But they, struck with amazement at the strange sight, are rendered unobservant of everything passing around them. But others of the party, who have come into the country equipped for such a purpose, coming from behind upon the birds, easily lay hold on them as they are gazing on the dancer.

Wherefore I desire that no one, astonished by similar wonders of those who interpret the (aspect of) heaven, should, like the owl, be taken captive. For the knavery practised by such speculators may be considered dancing and silliness, but not truth. Aratus,(1) therefore, expresses himself thus:—

"Just as many are they; hither and thither they roll
Day by day o'er heav'n, endless, ever, (that is, every star),
Yet this declines not even little; but thus exactly
E'er remains with axis fixed and poised in every part
Holds earth midway, and heaven itself around conducts."

CHAP. XLVII.—OPINIONS OF THE HERETICS BORROWED FROM ARATUS.

Aratus says that there are in the sky revolving, that is, gyrating stars, because from east to west, and west to east, they journey perpetually, (and) in an orbicular figure. And he says that there revolves towards(2) "The Bears" themselves, like some stream of a river, an enormous and prodigious monster, (the) Serpent; and that this is what the devil says in the book of Job to the Deity, when (Satan) uses these words: "I have traversed earth under heaven, and have gone around (it),"(3) that is, that I have been turned around, and thereby have been able to survey the worlds. For they suppose that towards the North Pole is situated the Dragon, the Serpent, from the highest pole looking upon all (the objects), and gazing on all the works of creation, in order that nothing of the things that are being made may escape his notice. For though all the stars in the firmament set, the pole of this (luminary) alone never sets, but, careering high above the horizon, surveys and beholds all things, and none of the works of creation, he says, can escape his notice.

"Where chiefly

Settings mingle and risings one with other."(4)

(Here Aratus) says that the head of this (constellation) is placed. For towards the west and east of the two hemispheres is situated the head of the Dragon, in order, he says, that nothing may escape his notice throughout the same quartet, either of objects in the west or those in the east, but that the Beast may know all things at the same time. And near the head itself of the Dragon is the appearance of a man, conspicuous by means of the stars, which Aratus styles a wearied image, and like one oppressed with labour, and he is denominated "Engonasis." Aratus(1) then affirms that he does not know what this toil is, and what this prodigy is that revolves in heaven. The heretics, however, wishing by means of this account of the stars to establish their own doctrines, (and) with more than ordinary earnestness devoting their attention to these (astronomic systems), assert that Engonasis is Adam, according to the commandment of God as Moses declared, guarding the head of the Dragon, and the Dragon (guarding) his heel. For so Aratus expresses himself:—

"The right–foot's track of the Dragon fierce possessing." (2)

CHAP. XLVIII.—INVENTION OF THE LYRE; ALLEGORIZING THE APPEARANCE AND POSITION OF THE STARS; ORIGIN OF THE PHOENICIANS; THE LOGOS IDENTIFIED BY ARATUS WITH THE CONSTELLATION CANIS; INFLUENCE OF CANIS ON FERTILITY AND LIFE GENERALLY.

And (Aratus) says that (the constellations) Lyra and Corona have been placed on both sides near him,—now I mean Engonasis,—but that he bends the knee, and stretches forth both hands, as if making a confession of sin. And that the lyre is a musical instrument fashioned by Logos while still altogether an infant, and that Logos is the same as he who is denominated Mercury among the Greeks. And Aratus, with regard to the construction of the lyre, observes:—

"Then, further, also near the cradle,(3)

Hermes pierced it through, and said, Call it Lyre."(4)

It consists of seven strings, signifying by these seven strings the entire harmony and construction of the world as it is melodiously constituted. For in six days the world was made, and (the Creator) rested on the seventh. If, then, says (Aratus), Adam, acknowledging (his guilt) and guarding the head of the Beast, according to the

commandment of the Deity, will imitate Lyra, that is, obey the Logos of God, that is, submit to the law, he will receive Corona that is situated near him. If, however, he neglect his duty, he shall be hurled downwards in company with the Beast that lies underneath, and shall have, he says, his portion with the Beast. And Engonasis seems on both sides to extend his hands, and on one to touch Lyra, and on the other Corona—and this is his confession;—so that it is possible to distinguish him by means of this (sidereal) configuration itself. But Corona nevertheless is plotted against, and forcibly drawn away by another beast, a smaller Dragon, which is the offspring of him who is guarded by the foot(5) of Engonasis. A man also stands firmly grasping with both hands, and dragging towards the space behind the Serpent from Corona; and he does not permit the Beast to touch Corona. though making a violent effort to do so. And Aratus styles him Anguitenens, because he restrains the impetuosity of the Serpent in his attempt to reach Corona. But Logos, he says, is he who, in the figure of a man, hinders the Beast from reaching Corona, commiserating him who is being plotted against by the Dragon and his offspring simultaneously.

These (constellations), "The Bears," however, he says, are two hebdomads, composed of seven stars, images of two creations. For the first creation, he affirms, is that according to Adam in labours, this is he who is seen "on his knees" (Engonasis). The second creation, however, is that according to Christ, by which we are regenerated; and this is Anguitenens, who struggles against the Beast, and hinders him from reaching Corona, which is reserved for the man. But "The Great Bear" is, he says, Helice,(6) symbol of a mighty world towards which the Greeks steer their course, that is, for which they are being disciplined. And, wafted by the waves of life, they follow onwards, (having in prospect) some such revolving world or discipline or wisdom which conducts those back that follow in pursuit of such a world. For the term Helice seems to signify a certain circling and revolution towards the same points. There is likewise a certain other "Small Bear" (Cynosuris), as it were some image of the second creation—that formed according to God. For few, he says, there are that journey by the narrow path.(7) But they assert that Cynosuris is narrow, towards which Aratus(8) says that the Si-donians navigate. But Aratus has spoken partly of the Sidonians, (but means) the Phoenicians, on account of the existence of the admirable wisdom of the Phoenicians. The Greeks, however, assert that they are Phoenicians, who have migrated from (the shores of) the Red Sea into this country where they even at present dwell, for this is the opinion of Herodotus.(1) Now Cynosura, he says, is this (lesser) Bear, the second creation; the one of limited dimensions, the narrow way, and not Helice. For he does not lead them back, but guides forward by a straight path, those that follow him being (the tail) of Canis. For Canis is the Logos,(2) partly guarding and preserving the flock, that is plotted against by the wolves; and partly like a dog, hunting the beasts from the creation, and destroying them; and partly producing

all things, and being what they express by the name "Cyon" (Canis), that is, generator. Hence it is said, Aratus has spoken of the rising of Canis, expressing himself thus: "When, however, Canis has risen, no longer do the crops miss." This is what he says: Plants that have been put into the earth up to the period of Canis' rising, frequently, though not having struck root, are yet covered with a profusion of leaves, and afford indications to spectators that they will be productive, and that they appear full of life, (though in reality) not having vitality in themselves from the root. But when the rising of Canis takes place, the living are separated from the dead by Canis; for whatsoever plants have not taken root, really undergo putrefaction. This Canis, therefore, he says, as being a certain divine Logos, has been appointed judge of quick and dead. And as (the influence of) Canis is observable in the vegetable productions of this world, so in plants of celestial growth—in men—is beheld the (power of the) Logos. From some such cause, then, Cynosura, the second creation, is set in the firmament as an image of a creation by the Logos. The Dragon, however, in the centre reclines between the two creations, preventing a transition of whatever things are from the great creation to the small creation; and in guarding those that are fixed in the (great) creation, as for instance Engonasis, observing (at the same time) how and in what manner each is constituted in the small creation. And (the Dragon) himself is watched at the head, he says, by Anguitenens. This image, he affirms, is fixed in heaven, being a certain wisdom to those capable of discerning it. If. however, this is obscure, by means of some other image, he says the creation teaches (men) to

philosophize, in regard to which Aratus has expressed himself thus:—

"Neither of Cepheus Iasidas are we the wretched brood."(3)

CHAP. XLIX.—SYMBOL OF THE CREATURE; AND OF SPIRIT; AND OF THE DIFFERENT ORDERS OF ANIMALS,

But Aratus says, near this (constellation) is Cepheus, and Cassiepea, and Andromeda, and Perseus, great lineaments of the creation to those who are able to discern them. For he asserts that Cepheus is Adam, Cassiepea Eve, Andromeda the soul of both of these, Perseus the Logos, winged offspring of Jove, and Cetos(4) the plotting monster. Not to any of these, but to Andromeda only does he repair, who slays the Beast; from whom, likewise taking unto himself Andromeda, who had been delivered (and) chained to the Beast, the Logos—that is, Perseus—achieves, be says, her liberation. Perseus, however, is the winged axle that, pierces both poles through the centre of the earth, and turns the world round. The spirit also, that which is in the world, is (symbolized by) Cycnus, a bird—a musical animal near "The Bears"—type of the Divine Spirit, because that when it approaches the end itself of life,(5) it alone is fitted by nature to sing, on departing with good hope from the wicked creation, (and) offering up hymns unto God. But crabs, and bulls, and lions, and rams, and goats, and kids, and as many other beasts as have their names used for denominating the stars in the firmament, are, he says, images, and exemplars from which the creation, subject to change, obtaining (the different) species, becomes replete with animals of this description.

CHAP. L.—FOLLY OF ASTROLOGY.

Employing these accounts, (the heretics) think to deceive as many of these as devote themselves over—sedulously to the astrologers, from thence striving to construct a system of religion that is widely divergent from the thoughts of these (speculators). Wherefore, beloved, let us avoid the habit of admiring trifles, secured by which the bird (styled) the owl (is captured). For these and other such speculations are, (as it were), dancing, and not Truth. For neither do the stars yield these points of information; but men of their own accord, for the designation of certain stars, thus called them by names, in order that they might become to them easily distinguishable. For what similarity with a bear or lion, or kid, or waterman, or Cepheus, or Andromeda, or the spectres that have names given them in Hades, have the stars that are scattered over the firmament—for we must remember that these men, and the titles themselves, came into existence long after the origin of man,—(what, I say, is in common between the two), that the heretics, astonished at the marvel, should thus strive by means of such discourses to strengthen their own opinions?

CHAP. LI.—THE HEBDOMADARII; SYSTEM OF THE ARITHMETICIANS; PRESSED INTO THE SERVICE OF HERESY; INSTANCES OF, IN SIMON AND VALENTINUS; THE NATURE OF THE UNIVERSE DEDUCIBLE FROM THE PHYSIOLOGY OF THE BRAIN.

But since almost every heresy (that has sprung up) through the arithmetical art has discovered measures of hebdomads and certain projections of Aeons, each rending the art differently, while whatever variation prevailed was in the names merely; and (since) Pythagoras became the instructor of these, tint introducing numbers of this sort among the Greeks from Egypt, it seems expedient not to omit even this, but, after we have given a compendious elucidation, to approach the demonstration of those things that we propose to investigate.

Arithmeticians and geometers arose, to whom especially Pythagoras first seems to have furnished principles. And from numbers that can continually progress ad infinitum by multiplication, and from figures, these derived their first principles,(1) as capable of being discerned by reason alone; for a principle of geometry, as one may perceive, is an indivisible point. From that point, however, by means of the art, the generation of endless figures from the point is discovered. For the point being drawn into length becomes a line, after being thus continued, having a point for its extremity. And a line flowing out into breadth begets a surface, and the limits of the surface are lines; but a surface flowing out into breadth becomes body, And when what is solid has in this manner derived existence from, altogether, the smallest point, the nature of a huge body is constituted; and this is what Simon expresses thus: "The little will be great, being as a point, and the great illimitable." Now this coincides with the geometrical doctrine of a point.

But of the arithmetical(2) art, which by composition contains philosophy, number became a first principle, which is an indefinable and incomprehensible(entity), comprising in itself all the numbers that can go on ad infinitum by aggregation. But the first monad became a principle, according to substance, of the numbers, which (principle) is a male(3) monad, pro-creating paternally all the rest of the numbers. Secondly, the duad is a female number, which by the arithmeticians is also itself denominated even. Thirdly, the triad is a male number; this also it has been the usual custom of arithmeticians to style odd. In addition to all these, the tetrad is a female number; and this same, because it is feminine, is likewise denominated even. All the numbers therefore, taken generically, are four—number, however, as regards genus, is indefinite—from which, according to their system, is formed the perfect number—I mean the decade. For one, two, three, four, become ten—as has been previously proved—if the proper denomination be preserved, according to substance, for each of the numbers. This is the sacred quaternion, according to Pythagoras, having in itself roots of an endless nature, that is, all other numbers; for eleven, and twelve, and the rest, derive the principle of generation from the ten. Of this decade—the perfect number—there are called four parts—number, monad, power, cube—whose connections and mixtures take place for the generation of increase, according to nature completing the productive number. For when the square is multiplied into itself, it becomes a biquadratic; but when the square is multiplied into a cube, it becomes the product of a quadratic and cube; but when a cube is multiplied into a cube, it becomes the product of cube multiplied by cube. Wherefore all the numbers are seven; so that the generation of things produced may be from the hebdomad—which is number, monad, power, cube, biquadratic, product of quadratic multiplied by cube, product of cube multiplied by cube.

Of this hebdomad Simon and Valentinus, having altered the names, detailed marvellous stories, from thence hastily adopting a system for themselves. For Simon employs his denominations thus: Mind, Intelligence, Name, Voice, Ratiocination, Reflection; and He who stood, stands, will stand. And Valentinus (enumerates them thus): Mind, Truth, Word, Life, Man, Church, and the Father, reckoned along with these, according to the same principles as those advanced by the cultivators of arithmetical philosophy. And (heresiarchs) admiring, as if unknown to the multitude, (this philosophy, and) following it, have framed heterodox doctrines devised by themselves.

Some indeed, then, attempt likewise to form the hebdomads from the medical(1) (art), being astonished at the dissection of the brain, asserting that the substance of the universe and the power of procreation and the Godhead

could be ascertained from the arrangement of the brain. For the brain, being the dominant portion of the entire body, reposes calm and unmoved, containing within itself the spirit. Such an account, then, is not incredible, but widely differs from the conclusions which these (heretics) attempt to deduce from it. For the brain, on being dissected, has within it what may be called a vaulted chamber. And on either side of this are thin membranes, which they term little wings. Now these are gently moved by the spirit, and in turn propel towards the cerebellum the spirit, which, careering through a certain blood–vessel like a reed, advances towards the pineal gland. And near this is situated the entrance of the cerebellum, which admits the current of spirit, and distributes it into what is styled the spinal marrow. But from them the whole frame participates in the spiritual energy, inasmuch as all the arteries, like a branch, are fastened on from this blood–vessel, the extremity of which terminates in the genital blood–vessels, whence all the (animal) seeds proceeding from the brain through the loin are secreted (in the seminal glands). The form, however, of the brain is like the head of a serpent, respecting which a lengthened discussion is maintained by the professors of knowledge, falsely so named, as we shall prove. Six other coupling ligaments grow out of the brain, which, traversing round the head, and having their termination in (the head) itself, hold bodies together; but the seventh (ligament) proceeds from the cerebellum to the lower parts of the rest of the frame, as we have declared.

And respecting this there is an enlarged discussion, whence both Simon and Valentinus will be found both to have derived from this source starting—points for their opinions, and, though they may not acknowledge it, to be in the first instance liars, then heretics. Since, then, it appears that we have sufficiently explained these tenets likewise, and that all the reputed opinions of this earthly philosophy have been comprised in four books; it seems expedient to proceed to a consideration of the disciples of these men, nay rather, those who have furtively appropriated their doctrines.(2)

NOTE.

[On p. 43 supra I omitted to direct attention to the desirable enlargement of note 3 by a reference to Homer's Hymn of Mercury and its minute description of the invention of the Lyre. The passage is given in Henry Nelson Coleridge's Introduction, etc., p. 202. The versified translation of Shelley is inimitable; in ottava rima, but instinct with the ethos of the original.] THE REFUTATION OF ALL HERESIES