

Fragments

Anaxagoras

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Anaxagoras of Klazomenae

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SEC: I. Anaxagoras of Klazomenae

AAAA of Klazomenae, son of Hegesiboulos, was born in the seventh Olympiad (500-497) and died in the first year of the eighty-eighth Olympiad (428), according to the chronicles of Apollodoros. It is said that he neglected his possessions in his pursuit of philosophy; he began to teach philosophy in the archonship of Kallias at Athens (480). The fall of a meteoric stone at Aegos Potamoi (467 or 469) influenced profoundly his views of the heavenly bodies. Perikles brought him to Athens, and tradition says he remained there thirty years. His exile (434-432) was brought about by enemies of Perikles, and he died at Lampsakos. He wrote but one book, according to Diogenes, and the same authority says this was written in a pleasing and lofty style.

SEC: II. The Fragments

All things were together, infinite both in number and in smallness; for the small also was infinite. And when they were all together, nothing was clear and distinct because of their smallness; for air and aether comprehended all things, both being infinite; for these are present in everything, and are greatest both as to number and as to greatness.

For air and aether are separated from the surrounding mass; and the surrounding (mass) is infinite in quantity.

And since these things are so, it is necessary to think that in all the objects that are compound there existed many things of all sorts, and germs of all objects, having all sorts of forms and colours and tastes.

But before these were separated, when all things were together, not even was any colour clear and distinct; for the mixture of all things prevented it, the

mixture of moist and dry, of the warm and the cold, and of the bright and the dark (since much earth was present), and of germs infinite in number, in no way like each other; for none of the other things at all resembles the one the other.

In all things there is a portion of everything except mind; and there are things in which there is mind also.

Other things include a portion of everything, but mind is infinite and self-powerful and mixed with nothing, but it exists alone itself by itself. For if it were not by itself, but were mixed with anything else, it would include parts of all things, if it were mixed with anything; for a portion of everything exists in everything, as has been said by me before, and things mingled with it would prevent it from having power over anything in the same way that it does now that it is alone by itself. For it is the most rarefied of all things and the purest, and it has all knowledge in regard to everything and the greatest power; over all that has life, both greater and less, mind rules. And mind ruled the rotation of the whole, so that it set it in rotation in the beginning. First it began the rotation from a small beginning, then more and more was included in the motion, and yet more will be included. Both the mixed and the separated and distinct, all things mind recognised. And whatever things were to be, and whatever things were, as many as are now, and whatever things shall be, all these mind arranged in order; and it arranged that rotation, according to which now rotate stars and sun and moon and air and aether, now that they are separated. Rotation itself caused the separation, and the dense is separated from the rare, the warm from the cold, the bright from the dark, the dry from the moist. And there are many portions of many things. Nothing is absolutely separated nor distinct, one thing from another, except mind. All mind is of like character, both the greater and the smaller. But nothing different is like anything else, but in whatever object there are the most, each single object is and was most distinctly these things.

And when mind began to set things in motion, there was separation from everything that was in motion, and however much mind set in motion, all this was made distinct. The rotation of the things that were moved and made distinct caused them to be yet more distinct.

The dense, the moist, the cold, the dark, collected there where now is the earth; the rare, the warm, the dry, the bright, departed toward the farther part of the aether.

Earth is condensed out of these things that are separated. For water is separated from the clouds, and earth from the water; and from the earth stones are condensed by cold; and these are separated farther from water.

And men were constituted, and the other animals, as many as have life. And the men have inhabited cities and works constructed as among us, and they have sun and moon and other things as among us; and the earth brings forth for them many things of all sorts, of which they carry the most serviceable into the house and use them. These things then I have said concerning the separation, that not only among us would the separation take place, but elsewhere too.

So these things rotate and are separated by force and swiftness. And the swiftness produces force; and their swiftness is in no way like the swiftness of the things now existing among men, but it is certainly many times as swift.

But mind, as it always has been, especially now also is where all other things are, in the surrounding mass, and in the things that were separated, and in the things that are being separated.

Things in the one universe are not divided from each other, nor yet are they cut off with an axe, neither hot from cold, nor cold from hot.

When they are thus distinguished, it is necessary to recognise that they all become no fewer and no more. For it is impossible that more than all should exist, but all are always equal.

For neither is there a least of what is small, but there is always a less. For being is not non-being. But there is always a greater than what is great. And it is equal to the small in number; but with reference to itself each thing is both small and great.

And since the portions of the great and the small are equal in number, thus also all things would be in everything. Nor yet is it possible for them to exist apart, but all things include a portion of everything. Since it is not possible for the least to exist, nothing could be separated, nor yet could it come into being of itself, but as they were in the beginning so they are now, all things together.

And there are many things in all things, and of those that are separated there are things equal in number in the greater and the lesser.

The Greeks do not rightly use the terms 'coming into being' and 'perishing.' For nothing comes into being nor yet does anything perish, but there is mixture and separation of things that are. So they would do right in calling the coming into being 'mixture,' and the perishing 'separation.'

For how could hair come from what is not hair? Or flesh from what is not flesh?

SEC: III. Passages from Plato referring to Anaxagoras

A He asserts that I say the sun is a stone and the moon is earth. Do you think of accusing Anaxagoras, Meletos, and have you so low an opinion of these men and think them so unskilled in letters as not to know that the books of Anaxagoras of Klazomenae are full of these doctrines? And forsooth the young men are learning these matters from me, which sometimes they can buy from the orchestra for a drachma at the most, and laugh at Sokrates if he pretends that they are his—particularly seeing they are so strange.

And if all things were composite and were not separated, speedily the statement of Anaxagoras would become true, 'All things were together.'

I heard a man reading from a book of one Anaxagoras (he said), to the effect that it is mind which arranges all things and is the cause of all things.

Reading the book, I see that the man does not make any use of mind, nor does he assign any causes for the arrangement of things, but he treats air and aether and water as causes, and many other strange things.

The writings of the wisest men say . . . that it is necessary for the like always to be loved by the unlike.

A They say you had an experience opposite to that of Anaxagoras; for though he inherited much property he lost it all by his carelessness; so he practised a senseless wisdom.

A And do you not believe Anaxagoras that the nature of all other things is mind, and that it is soul which arranges and controls them? (cf. *Phaedo* 72).

A It looks as though the opinion Anaxagoras recently expressed was a more ancient matter, that the moon has its light from the sun.

Anaxagoras is right in saying that this is mind, for he says that mind exercising absolute power and mingled with nothing disposes all things, running through all.

A But the youths seemed to be quarrelling about Anaxagoras or Oenopedos, for they were evidently drawing circles and imitating certain inclinations by the slope of their hands with great earnestness.

All the wise men agree that mind is king of heaven and earth for us.

Some long ago declared that always mind rules the all.

And some had the daring to conjecture this very thing, saying that it is mind which disposes all things in the heavens. And the same men again, being in error as to the nature of soul, in that it is older than bodies, while they regarded it as younger, to put it in a word, turned all things upside down, and themselves most of all. For indeed all things before their eyes—the things moving in the heavens—appeared to them to be full of stones and earth and many other soulless bodies, which dispose the causes of all the universe.

A All the arts that are great require subtlety and the higher kind of philosophy of nature; so such loftiness and complete effectiveness seem to come from this source. This Perikles acquired in addition to being a man of genius; for as the result, I think, of his acquaintance with such a man as Anaxagoras he became imbued with high philosophy, and arrived at the nature of intelligence [] and its opposite, concerning which Anaxagoras often discoursed, so that he brought to the art of speaking what was advantageous to him.

SEC: IV. Passages in Aristotle referring to Anaxagoras

And others say that the opposites existing in the one are separated out of it, as Anaximandros says, and as many as say that things are one and many, as Empedokles and Anaxagoras; for these separate other things out of the mixture. . . And Anaxagoras seems to have thought (the elements) infinite because he assumed the common opinion of the physicists to be true, that nothing arises out of non-being; for this is why they say, as they

do, that all things were together, and he established the fact that such 'arising' was change of form.

They thought that (what arose) arose necessarily out of things that are and their attributes, and, because the masses were so small, out of what we cannot perceive. Wherefore they say that everything was mixed in everything because they saw everything arising out of everything; and different things appeared and were called different from each other according to what is present in greater number in the mixture of the infinites; for the whole is not purely white or black or sweet or flesh or bone, but the nature of the thing seems to be that of which it has the most.

And as many as make the elements infinite, as Anaxagoras and Demokritos, the former out of homoeomeries. . . .

Anaxagoras speaks strangely about the permanence of the infinite; for he says that the infinite itself establishes itself—that is, it is in itself; for nothing else surrounds it, so that wherever anything may be, it is there in virtue of its origin.

Some who try to show that the void does not exist, do not prove this of what men are wont to call a void, but they make the mistake Anaxagoras did and those who attempted to prove it after this manner. For they show that air is something, blowing skins up tight, and showing how strong air is, and shutting it up in clepsydrae.

For Anaxagoras says that when all things were together and had been at rest for an infinite time, mind introduced motion and caused separation.

So Anaxagoras is right in saying that mind is not affected by other things and is unmixed, since he makes it the first principle of motion. For thus only, being unmoved, it might move, and being unmixed, it might rule.

Anaxagoras does not use this word () rightly, for he uses the word aether instead of fire.

Anaxagoras starts to construct the universe out of non-moving bodies.

Anaxagoras says the opposite to Empedokles, for he calls the homoeomeries elements (I mean such as flesh and bone and each of those things), and air and fire he calls mixtures of these and of all the other 'seeds;' for each of these things is made of the invisible homoeomeries all heaped together. Wherefore all things arise out of these things; for he calls fire and aether the same. And since there is a peculiar motion of every material body, and some motions are simple and some complex, and the complex motions are those of complex bodies and the simple motions of simple bodies, it is evident that there will be simple bodies. For there are also simple motions. So it is evident what elements are, and why they are.

Some of those who deny that there is a void say nothing definite concerning lightness and weight, for instance Anaxagoras and Empedokles.

Others assert that matter is more than one, as Empedokles and Leukippos and Anaxagoras, but there is a difference between these. And Anaxagoras even ignores his own word, for he says that he has shown genesis and destruction to be the same as change, but like the others, he says there are many elements. . . . Anaxagoras et al. say there are an infinite number of elements. For he regards the homoeomeries as elements, such as bone and flesh and marrow, and other things of which the part () has the same name as the whole.

In like manner Anaxagoras says that soul is the moving power, and if any one else has said that mind moved the all, no one said it absolutely as did Demokritos.

Anaxagoras speaks less clearly about these things; for many times he rightly and truly says that mind is the cause, while at other times he says it is soul; for (he says) it is in all animals, both great and small, both honoured and dishonoured. But it is not apparent that what is intelligently called mind is present in all animals alike, nor even in all men.

Anaxagoras seems to say that soul and mind are different, as we said before, but he treats both as one in nature, except that he regards mind especially as the first principle of all things; for he says that this alone of all things is simple and unmixed and pure. And he assigns both to the same first principle, both knowledge and motion, saying that mind moves the

all.

Anaxagoras alone says that mind does not suffer change, and has nothing in common with any of the other things.

It is necessary then that it be unmixed since it knows [] all things, as Anaxagoras says, in order that it may rule, that is, that it may know [].

Anaxagoras says that man is the most intelligent of animals because he has hands.

Anaxagoras said that plants are animals and feel pleasure and pain, inferring this because they shed their leaves and let them grow again.

Anaxagoras said that plants have these (motion and sensation) and breathing.

Anaxagoras said that their moisture is from the earth, and on this account he said to Lechineos that the earth is mother of plants, and the sun father.

Anaxagoras busying himself on this point, was satisfied with saying that the void does not exist, nevertheless he says beings move, though there is no void.

Anaxagoras of Klazomenae, who preceded him (Empedokles) in point of age and followed him in his works, says that the first principles are infinite in number; for nearly all things being made up of like parts (homoeomeries), as for instance fire and water, he says arise and perish only by composition and separation, and there is no other arising and perishing, but they abide eternal.

Besides these and similar causes, inasmuch as they are not such as to generate the nature of things, they (again compelled, as we said, by the truth itself) sought the first principle which lay nearest. For perhaps neither fire nor earth nor any other such thing should fittingly be or be thought a cause why some things exist and others arise; nor is it well to assign any such matter to its voluntary motion or to chance. Moreover one who said that as mind exists in animals, so it exists in nature as the cause of the universe and of all order, appeared as a sober man in contrast with those before who

spoke rashly.

Anaxagoras uses mind as a device by which to construct the universe, and when he is at a loss for the cause why anything necessarily is, then he drags this in, but in other cases he assigns any other cause rather than mind for what comes into being.

And if any one were to assume that Anaxagoras said the elements were two, he certainly would assume it according to a principle which that one did not describe distinctly; nevertheless he would follow along a necessary path those who guided him. For though it is strange particularly that he said all things had been mixed together at first, and that they must first have existed unmixed because they came together, and because chance had not in its nature to be mingled with chance; and in addition to this it is strange that he should separate qualities and accidental characteristics from essences (for there is mixture and separation of these), nevertheless if any one should follow him and try to put together what he wanted to say, perhaps he would seem to speak in a very novel manner. For when nothing was separated, clearly it was not possible to say anything true of that essence, I mean to say that anything was white or black or grey or any other colour, but everything was necessarily colourless; for it might have any of these colours. In like manner it is tasteless, nor according to the same line of argument could it have any other of the like qualities; for it could not have any quality, or quantity, or anything. For then one of what are sometimes called forms would exist for it, and this is impossible when all things are mixed together; for it would have been already separated, and he says that all things are mixed together except mind, and this alone is unmixed and pure. It results from these views that he says the first principles are unity (for this is simple and unmixed), and what is different from unity, such as we suppose the undefined to be before it was defined and partook of any form. So he does not speak rightly or clearly, still he means something like those who spoke later and with greater clearness.

And he called to mind the saying of Anaxagoras that just such things as men assume will be real for them.

The thought of Anaxagoras . . . that some things exist between contradictory propositions, so that all things are false; for when they are mixed together, the mixture is neither good nor not-good, so that

there is nothing true to be said.

According to the position of Herakleitos, or of Anaxagoras, it is not possible to speak the truth.

Wherefore they say that Thales and Anaxagoras and such wise men are lacking in intelligence, when they see them ignorant in things that are for their own advantage, and they say they know things extraordinary and wonderful and dreadful and divine, but these are of no use, because they do not seek human good.

And Anaxagoras did not seem to regard the rich man nor yet the powerful man as the happy one when he said he would not be surprised if any one appeared strange to the many; for these judge by what is outside, for that is all they can see.

SEC: V. Passages in the Doxographers referring to Anaxagoras

A Anaxagoras of Klazomenae declared that homoeomeries are the first principles of things. For he thought it most difficult to understand how anything should arise out of not-being, or perish into not-being. Certainly we take simple food of one kind, such as the bread of Demeter, and we drink water; and from this nourishment there are nurtured hair, veins, arteries, sinews, bones, and the other parts. Since these arise we must acknowledge that in the nourishment that is taken are present all realities, and from them everything will grow. And in that nourishment there are parts productive of blood and of sinews and bones and the rest; these are the parts that may be discovered by contemplation. For it is not necessary to perceive everything by sense, how that bread and water give rise to these things, but the parts may be discovered in them by contemplation. From the fact that parts exist in the nourishment like the things that are generated, he called them homoeomeries, and declared that they are the first principles of things; and he called the homoeomeries matter, but the active cause that arranges all things is mind. And he began thus: All things were together and mind arranged and disposed them. So we must assert that he associated an artificer with matter. i. 7; 299. Anaxagoras says that bodies are established according to first principles, and the mind of God arranged them and caused the generations of all things. i. 7; 302. The mind that made the universe is God. i. 14; 312. Anaxagoras: The homoeomeries are of many shapes. i. 17;

315. Anaxagoras and Demokritos: The elements are mixed by juxtaposition. i. 24; 320. (See p. 241. i. 29; 326.) Anaxagoras and the Stoics: Cause is not evident to human reason; for some things happen by necessity, and others by fate, and others by purpose, and others by chance, and others of their own accord. i. 30; 326. Anaxagoras: Origination is at the same time composition and separation, that is, genesis and destruction.

A The universe is one. 11. 4; 331. The universe is perishable. ii. 8; 337. Diogenes and Anaxagoras: After the universe arose and the animals were brought forth out of the earth, it tipped somehow of its own accord towards its south part, perhaps intentionally, in order that some parts of the universe might be inhabited and others uninhabited according as they are cold, or hot, or temperate. ii. 13; 341. Anaxagoras: The surrounding aether is of a fiery nature, and catching up stones from the earth by the power of its rotation and setting them on fire it has made them into stars. ii. 16; 345. Anaxagoras et al.: All the stars move from east to west. ii. 21; 351. Anaxagoras: The sun is many times as large as the Peloponnesos. ii. 23; 352. Anaxagoras: The solstices are due to a repulsion of the air towards the south, for the sun compressed it and by condensation made it strong. ii. 25; 356. Anaxagoras and Demokritos: The moon is a fiery solid body having in itself plains and mountains and valleys. i. 29; 360. Anaxagoras, as Theophrastos says, attributed eclipses to bodies below the moon which sometimes come in front of it. ii. 30; 361. Anaxagoras says that the unevenness of the composition (the surface of the moon) is due to the mixture of earthy matter with cold, since the moon has some high places and some low hollows. And the dark stuff is mingled with the fiery, the result of which is the shadowy appearance; whence it is called a false-shining star.

A Anaxagoras: The shadow of the earth falls along this part of the heaven (the milky way), when the sun is beneath the earth and does not shed light on all things. iii. 2; 366. Anaxagoras and Demokritos: (Comets etc.) are due to the conjunction of two or more stars, and the combination of their rays. 367.

The so-called shooting stars come darting down from the aether like sparks, and so they are immediately extinguished. iii. 3; 368. Anaxagoras: When the hot falls on the cold (that is, aether on air), it produces thunder by the noise it makes, and lightning by the colour on the black of the cloud, and the

thunderbolt by the mass and amount of the light, and the typhoon by the more material fire, and the fiery whirlwind by the fire mixed with cloud. iii. 4; 371. Anaxagoras: Clouds and snow are formed in somewhat the same manner; and hail is formed when, already cooled by its descent earthwards, it is thrust forth from frozen clouds; and it is made round. iii. 5; 373. Anaxagoras: (The rainbow) is a reflection of the sun's brightness from thick cloud, and it is always set opposite the star which gives rise to the reflection. And in a similar way he accounts for the so-called parhelia, which take place along the Pontos. iii. 15; 379. Anaxagoras: (Earthquakes take place) when the air falls on the thickness of the earth's surface in a sheltered place, and it shakes the surrounding medium and makes it tremble, because it is unable to effect a separation. iii. 16; 381. Anaxagoras: When the moisture which was at first gathered in pools was burned all around by the revolution of the sun, and the fresh water was evaporated into saltness and bitterness, the rest (of the sea) remained.

A Anaxagoras: The Nile comes from the snow in Ethiopia which melts in summer and freezes in winter. iv. 3; 387. Anaxagoras et al.: The soul is of the nature of air. iv. 5, 392. The intelligence is gathered in the breast. The soul is imperishable. iv. 9; 396. Anaxagoras et al.: Sensations are deceptive. 397. Sensations arise part by part according to the symmetry of the pores, each particular object of sense corresponding to a particular sense (organ). iv. 19; 409. Anaxagoras: Sound arises when wind falls on solid air, and by the return of the blow which is dealt to the ear; so that what is called an echo takes place.

A Anaxagoras, Parmenides: Males are conceived when seed from the right side enters the right side of the womb, or seed from the left side the left side of the womb; but if its course is changed females are born. v. 19; 430. As Anaxagoras and Euripides say: Nothing of what is born dies, but one thing separated from one part and added to another produces different forms. v. 20; 432. Anaxagoras: All animals have reason that shows itself in activity, but they do not have a sort of intelligence that receives impressions, which may be called the interpreter of intelligence. v. 25; 437. Anaxagoras: Sleep is due to a weariness of the body's energy; for it is an experience of the body, not of the soul; and death is the separation of the soul from the body.

Theophrastos says that the teaching of Anaxagoras is much like that of Anaximandros; for Anaxagoras says that in the separation of the infinite, things that are akin come together, and whatever gold there is in the all becomes gold, and whatever earth becomes earth, and in like manner each of the other things, not as though they came into being, but as though they were existing before. And Anaxagoras postulated intelligence () as the cause of motion and of coming into being, and when this caused separation worlds were produced and other objects sprang forth. He might seem, he says, to make the material causes of things taking place thus infinite, but the cause of motion and of coming into being one. But if one were to assume that the mixture of all things were one nature undefined in form and in amount, which he seems to mean, it follows that he speaks of two first principles, the nature of the infinite and intelligence, so that he appears to treat all the material elements in much the same manner as Anaximandros.

See Aet. ii. 29; Dox. 360, translated above, p. 255.

And the third opinion about the sea is that the water which filters and strains through the earth becomes salt because the earth has such flavours in it; and they point out as a proof of this that salt and saltpetre are dug up out of the earth, and there are bitter flavours at many places in the earth. Anaxagoras and Metrodoros came to be of this opinion.

Anaxagoras held that sensation takes place by opposite qualities; for like is not affected by like. And he attempts to enumerate things one by one. For seeing is a reflection in the pupil, and objects are not reflected in the like, but in the opposite. And for many creatures there is a difference of colour in the daytime, and for others at night, so that at that time they are sharpsighted. But in general the night is more of the same colour as the eyes. And the reflection takes place in the daytime, since light is the cause of reflection; but that colour which prevails the more is reflected in its opposite. In the same manner both touch and taste discern; for what is equally warm or equally cold does not produce warm or cold when it approaches its like, nor yet do men recognise sweet or bitter by these qualities in themselves, but they perceive the cold by the warm, the drinkable water by the salt, the sweet by the bitter, according as each quality is absent; for all

things are existing in us. So also smell and hearing take place, the one in connection with breathing, the other by the penetration of sound into the brain; for the surrounding bone against which the sound strikes is hollow. And every sensation is attended with pain, which would seem to follow from the fundamental thesis; for every unlike thing by touching produces distress. And this is evident both in the duration and in the excessive intensity of the sensations. For both bright colours and very loud sounds occasion pain, and men are not able to bear them for any long time. And the larger animals have the more acute sensations, for sensation is simply a matter of size. For animals that have large, pure, and bright eyes see large things afar off, but of those that have small eyes the opposite is true. And the same holds true of hearing. For large ears hear large sounds afar off, smaller ones escape their notice, and small ears hear small sounds near at hand. And the same is true of smell; for the thin air has the stronger odour, since warm and rarefied air has an odour. And when a large animal breathes, it draws in the thick with the rarefied, but the small animal only the rarefied, so that large animals have a better sense of smell. For an odour near at hand is stronger than one far off, because that is thicker, and what is scattered is weakened. It comes about to this, large animals do not perceive the thin air, and small animals do not perceive the thick air.

Whence Anaxagoras, who was a pupil of Anaximenes, first taught that the separation and character of all things were determined and arranged by the power and reason of infinite mind; but in this he fails to see that no motion can be connected with and contiguous to infinite sensation, and that no sensation at all can exist, by which nature as a whole can feel a shock. Wherefore if he meant that mind is as it were some sort of living being, there will be something inside of it from which that living being is determined. But what could be inside of mind? So the living being would be joined with an external body. But since this is not satisfactory, and mind is 'open and simple,' joined with nothing by means of which it can feel, he seems to go beyond the scope of our intelligence.

After him came Anaxagoras of Klazomenae, son of Hegesiboulos. He said that the first principle of the all is mind and matter, mind the active first principle, and matter the passive. For when all things were together, mind entered and disposed them. The material first principles are infinite, and the smaller ones of these he calls infinite. And all things partake of

motion when they are moved by mind and like things come together. And objects in the heavens have been ordered by their circular motion. The dense and the moist and the dark and the cold and all heavy things come together into the midst, and the earth consists of these when they are solidified; but the opposite to these, the warm, the bright, the dry, and the light move out beyond the aether. The earth is flat in form, and keeps its place in the heavens because of its size and because there is no void; and on this account the air by its strength holds up the earth, which rides on the air. And the sea arose from the moisture on the earth, both of the waters which have fallen after being evaporated, and of the rivers that flow down into it. And the rivers get their substance from the clouds and from the waters that are in the earth. For the earth is hollow and has water in the hollow places. And the Nile increases in summer because waters flow down into it from snows at the north.

Sun and moon and all the stars are fiery stones that are borne about by the revolution of the aether. And sun and moon and certain other bodies moving with them, but invisible to us, are below the stars. Men do not feel the warmth of the stars, because they are so far away from the earth; and they are not warm in the way that the sun is, because they are in a colder region. The moon is below the sun and nearer us. The sun is larger than the Peloponnesos. The moon does not have its own light, but light from the sun. The revolution of the stars takes them beneath the earth. The moon is eclipsed when the earth goes in front of it, and sometimes when the bodies beneath the moon go in front of it; and the sun is eclipsed when the new moon goes in front of it. And the solstices are occasioned because the sun and the moon are thrust aside by the air. And the moon changes its course frequently because it is not able to master the cold. He first determined the matter of the moon's phases. He said the moon is made of earth and has plains and valleys in it. The milky way is a reflection of the light of the stars which do not get their light from the sun. The stars which move across the heavens, darting down like sparks, are due to the motion of the sphere.

And winds arise when the air is rarefied by the sun, and when objects are set on fire and moving towards the sphere are borne away. Thunders and lightnings arise from heat striking the clouds. Earthquakes arise from the air above striking that which is beneath the earth; for when this is set in motion, the earth which rides on it is tossed about by it. And animals arose in the first

place from moisture, and afterwards one from another; and males arise when the seed that is separated from the right side becomes attached to the right side of the womb, and females when the opposite is the case. He was in his prime in the first year of the eighty-eighth

Olympiad, at the time when it is said Plato was born. They say that he became endowed with knowledge of the future.

Anaxagoras takes me aside and instructs me as follows:—Mind is the first principle of all things, and it is the cause and master of all, and it provides arrangement for what is disarranged, and separation for what has been mixed, and an orderly universe for what was disorderly.