

On the Eternity of the World

Philo of Alexandria

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Chapter I

In every uncertain and important business it is proper to invoke God, because he is the good Creator of the world, and because nothing is uncertain with him who is possessed of the most accurate knowledge of all things. But of all times it is most necessary to invoke him when one is preparing to discuss the incorruptibility of the world; for neither among the things which are visible to the outward senses is there anything more admirably complete than the world, nor among things appreciable by the intellect is there anything more perfect than God. But the mind is at all times the governor of the outward sense, and that which is appreciable by the intellect is at all times superior to that which is visible to the outward senses, but those persons in whom there is implanted a vigorous and earnest love of truth willingly undergo the trouble of making inquiries relative to the subordinate things, from that which is superior to and the ruler over them.

If then, we, who have been practised and trained in all the doctrines of prudence, and temperance, and virtue, have discarded all the stains of the passions and diseases, perhaps God would not disdain to give to souls completely purified and cleansed, so as to appear in his image, a knowledge of heavenly things either by means of dreams, or of oracles, or of signs, or of wonders. But since we have on us the marks of folly, and injustice, and of all other vices strongly stamped upon us and difficult to be effaced, we must be content even if we are only able by them to discover some faint copy and imitation of the truth.

It is right, therefore, for those who are investigating the question whether the world is perishable, since the two words, "corruption," and "the world," will be in continual use, first of all to investigate the precise meaning of both expressions, in order that we may know what is now signified, and what has been ordained. And we must enumerate, not indeed everything which is signified by those words, but so much as is useful for the purpose of our present instruction.

Chapter II

The world, therefore, is spoken of in its primary sense as a single system, consisting of the heaven and the stars in the circumference of the earth, and all the animals and plants which are upon it; and in another sense it is spoken of merely as the heaven. And Anaxagoras, having a regard to this fact, once made answer to a certain person who asked of him what the reason was why he generally endeavoured to pass the night in the open air, that he did so for the sake of beholding the world, by which expression he meant the motions and revolutions of the stars. And in its third meaning, as the Stoics affirm, it is a certain admirably-arranged essence, extending to the period of conflagration, either beautifully adorned or unadorned, the periods of the motion of which are called time. But at present the subject of our consideration is the world, taken in the first sense of the word, which being one only, consists of the heaven, and of the earth, and of all that is therein.

And the term corruption is used to signify a change for the worse; it is also used to signify the utter destruction of

that which exists, a destruction so complete as to have no existence at all; for as nothing is generated out of nothing, so neither can anything which exists be destroyed so as to become non-Existence.(this is similar to Lucretius's doctrine — Nil igitur fieri de nihilo posse putandum est.) For it is impossible that anything should be generated of that which has no existence anywhere, as equally so that what does exist should be so utterly destroyed as never to be mentioned or heard of again. And indeed in this spirit the tragedian says: —

Nor is it so very silly a thing to doubt whether the world is destroyed so as to pass into a state of non-existence, but rather whether it is subjected to a change from a new arrangement, being dissolved as to all the manifold forms of its elements and combinations so as to assume one and the same appearance, or whether, like a thing broken and dashed to pieces, it is subjected to a complete confusion of its different fragments.

Chapter III

And there are three different opinions on the subject which we are at present discussing. Since some persons affirm that the world is eternal, and uncreated, and not liable to any destruction; while others, on the contrary, say that it has been created and is destructible. There are also others who take a portion of each of these two opinions, agreeing with the last-mentioned sect that it has been created, but with the former class that it is indestructible; and thus they have left behind them a mixed opinion, thinking that it is at the same time created and

imperishable.

However, Democritus and Epicurus, and the principal number of the Stoic philosophers, affirm both the creation and the destructibility of the world, though they do not all speak in similar senses; for some give a sketch of many worlds, the generation of which they attribute to the concourse and combination of atoms, and their destruction they impute to the dissolution and breaking up of the combined particles. But the Stoics speak of one world only, and affirm that God is the cause of its creation, but that the cause of its corruption is no longer God, but the power of invincible, unwearied fire, which pervades all existing things, in the long periods of time dissolving everything into itself, while from it again a regeneration of the world takes place through the providence of the Creator.

And according to these men there may be one world spoken of as eternal and another as destructible, destructible in reference to its present arrangement, and eternal as to the conflagration which takes place, since it is rendered immortal by regenerations and periodical revolutions which never cease.

But Aristotle, with a knowledge as to which I know not to what degree I may call it holy and pious, affirmed that the world was uncreated and indestructible, and he accused those who maintained a contrary opinion of terrible impiety, for thinking that so great a visible God was in no respect different from things made with hands, though he contains within himself the sun, and the moon, and all the rest of the planets and fixed stars, and, in fact, the whole of the divine nature;

and he said in a cavilling and reproachful tone, that formerly he had feared for his house lest it should be overthrown by violent gales, or extraordinary storms, or by lapse of time, or through the want of the proper care requisite to preserve it, but that now he had a much greater fear hanging over him in consequence of those men who by their reasonings went to destroy the whole world.

But some say that it was not Aristotle who invented this doctrine, but some of the Pythagoreans; but I have met with a work of Ocellus, a Lucanian by birth, entitled, "A Treatise on the Nature of the Universe," in which he has not only asserted that the world is indestructible, but he has even endeavoured to prove it so by demonstrative proofs.

Chapter IV

But some say that the world has been proved by Plato in the *Timaeus* to be both uncreated and indestructible, in the account of that divine assembly in which the younger gods are addressed by the eldest and the governor of them all in the following terms; (*timaeus*, p. 40.) "O ye gods of gods, those works of which I am the father and the creator are indissoluble as long as I choose that they shall be so. Now everything which has been bound together is capable of being dissolved, but it is the part of an evil ruler to dissolve that which has been well combined and arranged, and which is in good condition. Wherefore, since you also have been created, you are not of necessity immortal or utterly indissoluble; nevertheless you shall not be dissolved, nor shall you be exposed to the fate of death, inasmuch as you have my will to keep you united, which is a still greater and

more powerful bond than those by which you were bound together when you were first created.”

But some persons interpret Plato’s words sophistically, and think that he affirms that the world was created, not inasmuch as it has had a beginning of creation, but inasmuch as if it had been created it could not possibly have existed in any other manner than that in which it actually does exist as has been described, or else because it is in its creation and change that the parts are seen.

But the forementioned opinion is better and truer, not only because throughout the whole treatise he affirms that the Creator of the gods is also the father and creator and maker of everything, and that the world is a most beautiful work of his and his offspring, being an imitation visible to the outward senses of an archetypal model appreciable only by the intellect, comprehending in itself as many objects of the outward senses as the model does objects of the intellect, since it is a most perfect impression of a most perfect model, and is addressed to the outward sense as the other is to the Intellect.(there is probably some corruption in the text here.)

But also because Aristotle bears witness to this fact in the case of Plato, who, from his great reverence for philosophy, would never have spoken falsely, and also because no one can possibly be more to be credited in the case of a teacher than his pupil, especially when the pupil is such a man as this who did not apply himself to instruction lightly with an indifference easily satisfied, but who even endeavoured to surpass all the discoveries of former men, and did actually devise some novelties and enrich every part of philosophy

with some most important discoveries.

Chapter V

But some persons think that the father of the Platonic theory was the poet Hesiod, as they conceive that the world is spoken of by him as created and indestructible; as created, when he says, —

Now Chaos was conceived by Aristotle to be a place, because it is absolutely necessary that a place to receive them must be in existence before bodies. But some of the Stoics think that it is water, imagining that its name has been derived from Effusion.(chysis, as if chaos were derived from *cheo*, “to pour.”) But however that may be, it is exceedingly plain that the world is spoken of by Hesiod as having been created:

and a very long time before him Moses, the lawgiver of the Jews, had said in his sacred volumes that the world was both created and indestructible, and the number of the books is five. The first of which he entitled Genesis, in which he begins in the following manner: “in the beginning God created the heaven and the earth; and the earth was invisible and without form.” Then proceeding onwards he relates in the following verses, that days and nights, and seasons, and years, and the sun and moon, which showed the nature of the measurement of time, were created, which, having received an immortal portion in common with the whole heaven, continue for ever indestructible.

But we must place those arguments first which make out the world to be uncreated and indestructible, because of our respect for that which is visible, employing an

appropriate commencement. To all things which are liable to destruction there are two causes of that destruction, one being internal and the other external; therefore you may find iron, and brass, and all other substances of that kind destroyed by themselves when rust, like a creeping disease, overruns and devours them; and by external causes when, if a house or a city is burnt, they also are consumed in the conflagration, being melted by the violent impetuosity of the fire. A similar end also befalls animals, partly when they are sick of diseases arising internally, and partly when they are destroyed by external causes, being sacrificed, or stoned, or burnt, or when they endure an unclean death by hanging.

And if the world also is destroyed, then it must of necessity be so either by some external cause, or else by some one of the powers which exist within itself; and both these alternatives are impossible, for there is nothing whatever outside of the world, since all things are brought together in order to make it complete and full, for it is in this way that it will be one, and whole, and free from old age; it will be one, because if anything were left outside of it, then another world might be created resembling that which exists now; and whole, because the whole of its essence is expended on itself; and exempt from old age and from all disease, since those bodies which are liable to be destroyed by disease or old age are violently overthrown by external causes, such as heat, and cold, and other contrary qualities, no power of which is able to escape so as to surround and attack the world, all those being entirely enclosed within, without any part whatever being separated from the rest. But if indeed there is any external thing it must by all means be a vacuum, or else a nature absolutely

impossible, which it would be impossible should either suffer or do anything.

And again, it will also not be dissolved by any cause existing within itself; first of all because, if it were, then the part would be greater and more powerful than the whole, which is the greatest possible absurdity, for the world, enjoying an unsurpassable power, influences all its parts, and is not itself influenced or moved by any one of them; in the second place because, since there are two causes of corruption, the one being internal and the other external, those things which are competent to admit the one must also by all means be liable to the other;

and a proof of this may be found in oxen, and horses, and men, and other animals of similar kinds, because it is their nature to be destroyed by the sword, or to be liable to die by disease; for it is difficult, or I might rather say impossible, to find anything which, being by nature at the mercy of some external cause perceptible by the intellect, will still not be liable to corruption ... by itself when the world was Not.(yonge's MS. sequence for sections 24û77 differs from the Cohn-Wendland text (Loeb). The material has been reordered to reflect the Loeb sequence.)

Since, therefore, the arrangement of the world is such as I have endeavoured to describe it, so that there is no part whatever left out, so as for any force to be applied, it has now been proved that the world will not be destroyed by any external thing, because in fact nothing whatever external has been left at all; nor will it be destroyed by anything in itself on account of the proof which has already been considered and stated, according to which that which

was obnoxious to the power of one of those causes was also naturally susceptible of the influence of the other.

Chapter VI

And there are testimonies also in the *Timaeus* to the fact of the world being exempt from disease and not liable to destruction, such as these: "Accordingly, of the four elements the constitution of the world receives each in all its integrity; for he who compounded it made it to consist of the whole of fire, and the whole of water, and the whole of air, and the whole of earth, not leaving any portion or any power of any one of them outside, from the following intentions: —

in the first place, in order that the whole might be as far as possible a perfect animal made up of perfect parts. And besides all these things, he ordained that it should be one, inasmuch as there is nothing left out of which another similar world could be composed. Moreover, he willed that it should be exempt from old age, and free from all disease, considering that those things which in the body are hot or cold, or which have mighty powers, if standing all around and falling upon it unseasonably, would be likely to dissolve it, and, by introducing diseases and old age, cause it to decay and perish. For this cause, and because of this reason, God made the whole universe to consist of entire and perfect elements, and exempt from old age and free from disease."

Let this be taken as a testimony delivered by Plato to the imperishable nature of the world. Its uncreated character follows from the truth of natural philosophy; for dissolution

must of necessity attend everything which is born, and incorruptibility must inevitably belong to everything which is unborn; since the poet who wrote the following iambic verse,

The argument may be stated in a different way as follows. All compound things which are destroyed are dissolved into the elements of which they were compounded; accordingly, dissolution is nothing else but a return of everything to its original constituent parts; just as, on the contrary, composition is that which compels the things combined to come together in a manner contrary to their nature; and indeed, this appears to be the most exact truth;

for men are composed of the four elements which together make up the whole of the universe, the heaven, the earth, the air, and fire, borrowing a few parts of each in a manner at first sight hardly consistent with nature. But the things which are thus combined together are necessarily deprived of a motion in accordance with nature; for instance, warmth is deprived of its upward motion, and coldness of its downward tendency, the earthy and somewhat weighty substance being lightened and assuming the higher place, which the most earth-like of our own parts, the head, has obtained in us.

But of all bonds, that is the worst which is forged by violence, and which, being violent, is also short-lived; for it is speedily broken by those who are bound in it, since they become restive from their desire for a motion in accordance with nature, to which they hasten; for as the tragic poet says, —

And this law and ordinance is established with reference to everything which is destroyed, that wherever composite things are existing in combination they are thrown into disorder instead of into the order in accordance with nature, which they previously enjoyed, and they are removed to situations opposite to those in which they were previously placed, so that they seem in a manner to be sojourners; and when they are dissolved again, then they return to the appropriate parts allotted to them by nature.

Chapter VII

But since the world has no participation in that irregularity which exists in the things which I have just been mentioning, let us stop awhile and consider this point. If the world were liable to corruption and destruction, it follows of necessity that all its parts would at present be arranged in a position not in accordance with nature: but it is impious even to imagine such a thing as this; for all the parts of the world have received the most excellent position possible, and an arrangement of the purest symmetry and harmony; so that each individual part, being content with its place as a native country to it, does not seek any change for the better.

On this account it is that the most central position of all has been assigned to the earth, to which all things belonging to it adhere, and to which they descend again even if you throw them into the air: and this is a proof that their place is in accordance with nature; for wherever anything is borne without any violence, and where it then remains firm and stationary, that is clearly its natural place.

And then, in the second place, water was poured over the earth, and air and fire have gone from the central to the upper part, air having received for its portion the region which is on the borders between air and fire, and fire having received the highest place of all: on which account, if you light a torch and press it down towards the ground, nevertheless the flame will still turn in a contrary direction, and lightening itself in accordance with the natural motion of fire, will rise upwards:

if, then, motion contrary to nature is the cause of corruptibility and destruction in the case of other animals, but if in the case of the world every one of its parts is arranged in complete accordance with nature, having had appropriate positions allotted to each of them, then surely the world must most justly be pronounced incorruptible and imperishable.

Moreover this point is manifest to every one, that every nature is desirous to keep and preserve, and if it were possible to make immortal, everything of which it is the nature; the nature of trees, for instance, desires to preserve trees, and the nature of animals desires to preserve each individual animal.

But particular nature is of necessity unable to conduct what it belongs to to eternity; for want, or heat, or cold, or innumerable other ordinary circumstances, when they affect particular things, shake them and dissolve the bond which previously held them together, and at last break them to pieces; but if nothing resembling any of these things were lying in wait outside, then in that case nature itself, as far as it is possible, would preserve everything both great

and small free from old age.

It follows therefore of necessity, that the nature of the world must desire the durability of the universe; for it is not worse than particular natures, so that it should run away and desert its proper duties, and attempt to produce disease instead of health, and corruption and destruction instead of complete safety, since, —

wherefore Plato has well Said:(timaeus, p. 33.)— “For nothing ever departed from it, nor did anything ever come to it from any quarter; for that was not possible; for there was nothing in existence which could come; for since it supplies itself with nutriment out of its own consumption, it also does everything and suffers everything in itself and by itself, and is compounded with the most consummate art. For he who created it thought that it would be better if wholly self-sufficient, than if in continual need of accessories from other quarters.”

Chapter VIII

However, this argument also is a most demonstrative one, on which I know that vast numbers of philosophers pride themselves as one most accurately worked out, and altogether irresistible; for they inquire what reason there is for God’s destroying the world. For if he destroys it at all he must do so either with the intention of never making a world again, or with the object of creating a second fresh one;

now the former idea is inconsistent with the character of God; for it is proper to change disorder into order, and not order into disorder; in the second place, it is so because it

would give rise to repentance, which is an affliction and a disease of the soul. For he ought either never to have created a world at all, or else, if he judged that it was a fitting employment for him, he ought to have been pleased with it after it was made.

But the second reason deserves no superficial examination; for if he were intending to make another world instead of that which exists at present, then of necessity this second world that would be made, in that case, would be either worse than, or similar to, or better than the first; everyone of which ideas is inadmissible; for if the new world is to be worse than the former, then the maker must be also worse: but all the works of God are without blemish, beyond all reproach and wholly faultless, inasmuch as they are wrought with the most consummate skill and knowledge; for as the proverb says; —

Again, if the new world is to be exactly like the old one, then the maker is only wasting his labour, and differs in no respect from infant children who, very often while playing on the sea shore raise up little mounds of sand, and then pull them down again with their hands and destroy them; for it would have been much better than making another world exactly like the former, neither to take anything from, nor to add anything to, nor to change either for the better or for the worse, what existed originally, but to let it remain just as it was.

If, on the other hand, he is about to make a world better than the former one, then the maker too must be better than the maker of the former world, so that when he made the former world he was inferior both in his skill and in his

intellect, which it is impious even to imagine, for God is at all times equal and similar to himself, being neither capable of any relaxation which can make him worse, nor of any extension which can make him better. Men, indeed, do admit of such inequalities in either direction, being naturally liable to alter either for the better or for the worse, and continually admitting of increase, and advance, and improvement, and everything contrary to these states;

and besides this, the works of us who are but mortal men may very appropriately be perishable, but the works of the immortal must in all consistency and reason be likewise imperishable, for it is natural that what is made should resemble the nature of the maker.

Chapter IX

And, indeed, this I imagine is evident to every one, that if the earth were to be destroyed, then all land animals of every kind must also perish with it; and if the water were destroyed, all aquatic animals must perish; and in like manner if the air and fire were to be destroyed, all the animals which traverse the air or which are born in the fire must come to an end at the same time.

Therefore, on the same principle, if the heaven is destroyed, the sun and moon will also be destroyed, and all the other planets likewise will be destroyed, and all the fixed stars, and all that host of gods visible to the outward senses which was formerly considered so happy; and to imagine this is nothing else than to fancy the gods themselves in a process of destruction, for this is equivalent to considering men immortal. And yet in a comparison

between different objects devoid of honour, if you were to consider the matter, you would find it more consistent with probability to look on men as immortal than to believe that the gods are perishable, since it might happen through the grace of God, for it is not improbable that a mortal might receive immortality, but it is impossible for gods to lose their immortality even if the sophistries of mankind should run on to ever such a degree of wicked insanity.

And, moreover, those persons who allege conflagrations and regenerations of the world, think and confess that the stars are gods, which nevertheless they are not ashamed to destroy as far as their arguments go; for they are bound to prove them to be either red hot pieces of iron, as some do affirm, who argue about the whole of the heaven as if it were a prison, talking utter nonsense, or else to look upon them as divine and godlike natures, and then to attribute to them that immortality which belongs to gods. But as it is, they have wandered so far from true doctrine, that without being aware of it they have attributed corruptibility and perishableness to providence (and that is the soul of the world) by the inconsistent principles which they advocate.

Therefore Chrysippus, the most celebrated philosopher of that sect, in his treatise about Increase, utters some such prodigious assertions as these, and after he has prefaced his doctrines with the assertion that it is impossible for two makers of a species to exist in the same substance, he proceeds, "Let it be granted for the sake of argument and speculation that there is one person entire and sound, and another wanting one foot from his birth, and that the sound man is called Dion and the cripple Theon, and afterwards

that Dion also loses one of his feet, then if the question were asked which had been spoiled, it would be more natural to say this of Theon;" but this is the assertion of one who delights in paradox rather than in truth,

for how could it be said that he who had suffered no mutilation whatever, namely Theon, was taken off, and that Dion, who had lost a foot, was not injured? Very appropriately, he will reply, for Dion, who had had his foot cut off, falls back upon the original imperfection of Theon, and there cannot be two specific differences in the same subject, therefore it follows of necessity that Dion must remain, and that Theon must be taken off —

Consider the matter thus: let the world be the subject of our argument, as Dion was just now, for it is perfect, and let the soul of the world take the place of Theon, who was imperfect, since a part is less than the whole; and as the foot was cut off from Dion, so also let everything which resembles a body be cut off from the world;

therefore it is necessary to say that the world has not been destroyed though its body has been taken away, just as Dion was not destroyed by having his foot cut off, but the soul of the world it is that has perished, like Theon, who suffered no artificial mutilation, for the world also receded to a lesser substance when all of it that resembled a body was taken away. And the soul was destroyed because there could not be two specific differences affecting the same and since it is imperishable it follows of necessity that the world also must be imperishable.

Chapter X

However, time also affords a very great argument in favour of the eternity of the world, for if time is uncreated, then it follows of necessity that the world also must be uncreated. Why so? Because, as the great Plato says, it is days, and nights, and months, and the periods of years which have shown time, and it is surely impossible that time can exist without the motion of the sun, and the rotary progress of the whole heaven. So that it has been defined very felicitously by those who are in the habit of giving definitions of things, that time is the interval of the motion of the world, and since this is a sound definition, then the world must be co-eval with time and also the cause of its existence.

And it is the most absurd of all ideas to fancy that there ever was a time when the world did not exist, for its nature is without any beginning and without any end, since these very expressions, "there was," "when," "formerly," all indicate time; and keeping to this view, then, according to the theory of the conflagration [...](there is supposed to be a very large hiatus here.) he at a late period of his life entertained doubts and withheld any positive opinion; for it does not belong to youth, but to old age, to see clearly things of solemn importance which it is desirable to understand, and especially as to matters which it is not the outer sense, which is irrational and deceitful, that determines, but the pure and unalloyed intellect. For that which has no existence is not put in motion, but it has been shown already that time is an interval of the motion of the world. It follows, therefore, of necessity, that each of these things must have subsisted from all eternity, without receiving any beginning of generation, and being in

consequence not liable to any corruption.

Perhaps some quibbling Stoic will say that time is admitted to be an interval of the motion of the world, but not of that world only which is arranged and adorned by itself, but also of that one which is conceived of in connection with the conflagration which has been spoken of; to whom we must reply,— “My good man, you, misapplying words, call what is disorderliness and a want of arrangement order (kosmos), for if this thing which we see is correctly and appropriately called the world (kosmos), (Philo is playing here on the two meanings of the word kosmos, which signified both “order” and “the world.”) being arranged and adorned (kekosmēmenos) as we see it by man, by the perfection of his skill, then any one would be surely correct in calling the change which is wrought in it by fire a want of order.”

Chapter XI

But Critolaus, a man who devoted himself very much to literature, and a lover of the Peripatetic philosophy, agreeing with the doctrine of the eternity of the world, used the following arguments to prove it: “If the word was created, then it follows of necessity that the earth was created also; and if the earth was created, then beyond all question the human race was so too. But man was not created, since he subsists of an everlasting race, as shall be proved, therefore the world is eternal.”

But I must now proceed to examine the argument which I postponed just now, if indeed things that are so evident stand in need of any demonstration; but, indeed, proofs are

necessary on account of the inventors of fables who, filling all life with their falsehoods, have utterly driven truth out of the land, and have not merely banished it from cities and houses, but have even deprived each separate individual of that most valuable possession, and, for the purpose of alluring his sight, have invented metres and rhythm as a bait and a snare, by which they cajole the ears of fools, just as ugly and shapeless courtesans allure the eyes by necklaces and spurious ornaments in the absence of all genuine beauty,

for they say that the generation of mankind by means of one another is a more recent work of nature, but that the more original and ancient mode of their birth is out of the earth, since she both is and is considered the mother of all men. And they say that those men who are celebrated among the Greeks as having sprung from seed were produced and grew up as trees do now, being perfect and completely armed sons of the earth.

But that this is a mere fiction of fable it is easy to see from many circumstances. For the very moment that the first man was born there was a necessity for his receiving growth in accordance with the previously defined measures and numbers of time, for nature has arranged the different ages as certain steps along which man in a manner ascends and descends; he ascends while he is growing, and he descends at the period when he is lessening; and the boundary of the uppermost steps is the prime of life at which when a man has arrived he no longer makes any further advance; but as runners who run the diaulos turn back again upon the same path which they have already

travelled, so too does man retrace his steps, giving back in the weakness of old age what he has received from vigorous youth;

but to fancy that any one has ever been born absolutely perfect is the part of those who are ignorant of the laws of nature, which are unchangeable ordinances. For our minds, being vitiated by the contagion of the mortal body which is united to them, are very naturally liable to changes and alterations, but the works of the nature of the universe are unalterable, since she has dominion over all things, and by means of the stability of whatever desires she has once established she preserves the definitions which have been originally fixed in an unchangeable state.

If then she had originally thought it proper that men should be born perfect, now also man would still be born in a perfect state, without ever being an infant, or a boy, or a youth, but he would at once be a man, and perhaps he would be altogether exempt from all diminution, for up to the prime of a man's life all his changes tend towards increase, but from that period up to old age and death they exist with a gradual diminution; and it is natural to suppose that he who has no share in the former must also be free from the subsequent changes.

And what is there that can hinder men from shooting up now out of the ground like plants, as they say that they did in former times? For the earth has not yet grown old so as to appear to have become barren by reason of the lapse of time, but it remains in the same condition as before, being always young, because it is a fourth part of the universe, and for the sake of ensuring the duration of the universe it

is bound not to decay, because its kindred elements, water, air, and fire, all remain for ever exempt from old age.

And there is a visible proof of the uninterrupted and everlasting vigour of the earth in the plants which spring from it, for being purified, either by the overflowing of rivers, as they say that Egypt is, or by annual rains, by such irrigation it refreshes and recruits its exhausted powers, and then, having rested for a while, it recovers its natural powers to the full extent of its original vigour, and then it begins again with a repetition of the production of similar things to those which it produced before to supply abundant food to every description of animal.

Chapter XII

In reference to which fact it appears to me that the poets were very felicitous in the appellation which they gave to the earth when they called it Pandora, inasmuch as it gives all things, (*panta doproumenēn.*) both such as are required for use and such as serve to pleasure and to enjoyment, and that not to some only but to all animals which enjoy life. Accordingly, if any one, when the spring was in its prime, should be borne on wings and raised aloft, and look down from his height upon the mountain and champaign country, and see the one abounding in rich grass, and verdant, producing herbage, and fodder, and barley, and wheat, and innumerable other kinds of crops such as are grown from seed which the husbandmen have strewn, and which the season of the year affords of its own accord, and the other overshadowed with branches and leaves by which the trees are adorned, and very full of fruits (not only such as are

suitable for food, but also of such as are able to heal suffering, for the fruit of the olive relieves the fatigue of the body, and that of the vine, when drunk in moderation, relaxes the excessive pains of the soul),

and rich also in the fragrant airs which are borne around from flowers, and the indescribable peculiarities of the various flowers which are diversified by divine skill. And then, if he turns aside his eyes from those trees which admit of cultivation, and beholds in their turn poplars, and cedars, and pines, and ashes, and the lofty oaks, and the dense and unceasing masses of all the other wild trees which overshadow the most numerous and the greatest of the mountains, and the greater part of the border country wherever there is any deep soil, he will then know that the vigour of the earth, which is always young, is unremitting, unsubdued, and unwearied.

So that since it is in no degree deprived of any portion of its former strength, if it had ever done so before, it would be bringing forth men now also, for two most forcible reasons, one in order that it might not quit the classification belonging to it, especially in the sowing and production of that most excellent of all the creatures which dwell upon the earth, the ruler of all, man, and secondly for the sake of divine assistance to women, who after they have conceived are for about ten months weighed down with the most severe pains, and when they are about to bring forth do very often die in the very pains of labour.

Is it not then altogether a terrible piece of stupidity to imagine that the earth contains any womb calculated for the production of men? for the womb is the place which vivifies

the animal, being as some one has called it the workshop of nature, in which it fashions nothing but animals; but it is not a portion of the earth, but of a female animal, carefully fashioned so as to be adapted for the production of living creatures, since otherwise it would be necessary for us to attribute breasts to the earth as to a woman, when it produces men and they are born, so that when first born they may have appropriate food. But there is no river nor fountain in the whole habitable world which is said ever to have produced milk instead of water;

and in addition to this, as it is necessary that a child just born must be fed on milk, so also must he avail himself of the protection of clothing on account of the injury which ensues from cold or heat to children while they are being reared, on which account nurses and mothers, to whom the care of infants when just born is of necessity committed, wrap them up in swaddling clothes; but if they were produced out of the earth, how would it be possible that, being left completely naked, they would not be at once destroyed either by the coldness of the air on the one hand, or the burning heat of the sun on the other? for when great cold or great heat gets the mastery, it produces diseases and corruptions.

But after the inventors of fables once began to neglect the truth they then ventured to add to their monstrous stories the fiction that those men who sprung from seed were born also to complete armour; for what smith, or what new Vulcan, was there under the earth so skilful as in a moment to prepare so many suits of armour? and what experience had creatures just born to enable them to use their

weapons? for man is a very peaceful animal, nature having given to him reason as his especial honour, by means of which he charms and tames the savage passions. It would have been much better instead of arms to give him a herald's wand, a symbol of agreement and peace suitable to a reasonable nature, in order that he might so proclaim peace instead of war to all men everywhere.

Chapter XIII

We have now then discussed at sufficient length the nonsense in opposition to truth which is uttered by those who build up falsehood and fables. But we must be well assured that men have from all eternity sprung from other men in constant succession, the man implanting the seed in the woman as in a field, and the woman receiving the seed so as to preserve it, and nature by her unseen operations fashioning everything, and each separate part of the body and of the soul, and giving to the whole race of mankind that which each individual separately is unable to receive, namely, the principle of immortality; for though the individual members are continually perishing, yet the race remains undying as a truly divine work. But if man, who is but a small portion of the universe, is eternal, then certainly the world itself must have been uncreated so as to be imperishable.

Chapter XIV

But Critolaus, in arguing in support of his opinion, brought forward an argument of this kind,— “That which is the cause to man of his being in health is itself free from disease, and, in like manner, the cause of his keeping awake

must itself be sleepless; and if this is the case, that which is the cause of his existing for ever must itself also be everlasting." Now the cause of man's existing for ever is the world, since it is so to all other things whatever; therefore the world also is immortal.

Nevertheless, this point also is worthy of one consideration: that everything which is born must by all means at the beginning be imperfect, but as time advances he must increase till he arrives at complete perfection, so that if the world was born it was at one time (that I may use the expressions appropriate to the ages of men) a mere infant, and subsequently increasing in periods of years and lapse of time, it at last and with great difficulty arrived at perfection, for of necessity the period at which that which of all things has the longest existence must be late.

But if any one fancies that the world has ever really been subjected to such changes as these, it is time that he should learn that he has been under the influence of incurable madness, for it is plain that if that is the case not only will its bodily appearance be increased, but its mind also will receive growth, since they who attribute liability to perish to it conceive it to be a rational creature.

Therefore, just like a man, it will be devoid of reason at the commencement of its existence, but endowed with reason at the age when it is in its prime, which it is impious not only to say, but even to think, for how can we imagine the most perfect visible circumference which surrounds us, and which contains within itself so many individual inhabitants, is not always perfect both in soul and body, being exempt from all those evils in which everything which

has been born and which is perishable is implicated?

Chapter XV

And in addition to this he says, that there are three causes of death to living animals, besides the external causes which may affect them, namely, disease, old age, and want, by no one of which is the world liable to be attacked or subdued, for that it is composed of entire elements, since there is no part of them which is left out or which remains at liberty, so that any violence can be offered to it, and it also is superior to those powers from which diseases arise; and they yielding keep the world free from all disease, and free from old age, and in a state of the most perfect self-sufficiency as to all its requirements, and without need of anything, since there is nothing wanting to it which can possibly contribute to its durability, and wholly exempt from all successions and alternations of fulness and emptiness, which animals being subject to by reason of their unregulated insatiability, bring upon themselves death instead of life, or, to speak more accurately, a life which is more pitiable than any destruction.

Moreover, if we saw that there was no such thing as any eternal nature to be seen, those who assert the liability of the world to destruction would not appear to be so guilty of disparaging the world without any excuse, since they would have no example whatever of anything being everlasting; but since fate, according to the doctrine of those who have investigated the principles of natural philosophy most accurately, is a thing without any beginning and without any end, connecting all the causes of everything, as to leave

no break and no interruption, why may we not in like manner also affirm of the nature of the world that it subsists for a great length of time, being, as it were, an arrangement of what is otherwise in no order, a harmony of what is otherwise wholly destitute of such harmony, an agreement of what is otherwise without agreement, a union of things previously separated, a condition of stocks and stones, a nature of things growing from seed and of trees, a life of all animals, the mind and reason of men, and the most perfect virtue of virtuous men? But if the nature of the world is uncreated and indestructible, then it is plain that the world is held together and powerfully preserved by an everlasting indissoluble chain.

But some of those who used to hold a different opinion, being overpowered by truth, have changed their doctrine; for beauty has a power which is very attractive, and the truth is beyond all things beautiful, as falsehood on the contrary is enormously ugly; therefore Boethus, and Posidonius, and Panaetius, men of great learning in the Stoic doctrines, as if seized with a sudden inspiration, abandoning all the stories about conflagrations and regeneration, have come over to the more divine doctrine of the incorruptibility of the world;

and it is said also that Diogenes, when he was very young, agreed entirely with those authors ...

Chapter XVI

But Boethus adduces the most convincing arguments, which we shall proceed to mention immediately; for if, says he, the world was created and is liable to destruction, then

something will be made out of nothing, which appears to be most absurd even to the Stoics. Why so? Because it is not possible to discover any cause of destruction either within or without, which will destroy the world. For on the outside there is nothing except perhaps a vacuum, inasmuch as all the elements in their integrity are collected and contained within it, and within there is no imperfection so great as to be the cause of dissolution to so great a thing. Again, if it is destroyed without any cause, then it is plain that from something which has no existence will arise the engendering of destruction, which is an idea quite inadmissible by reason;

and, indeed, they say that there are altogether three generic manners of corruption, one which arises from division, another which proceeds from a destruction of the distinctive quality which holds the thing together, and the third from confusion; therefore the things which consist of a union of separate members, such as flocks of goats, herds of oxen, choruses, armies; or, again, bodies which are compounded of limbs joined together, are dissolved by disjunction and separation. But wax, when stamped with a new impression, or softened before being remodelled so as to present a new and different appearance, is corrupted by a destruction of the distinctive quality which previously held it together. Other things are corrupted by confusion, as the medicine which the physicians call tetrapharmacon, for the powers of the drugs brought together and combined were destroyed in such a manner as to produce one perfect medicine of especial virtue.

By which, then, of these modes of corruption is it becoming to say that the world is destroyed? By that which is caused by separation? No, for it is not compounded of separate members so that its different parts can be dispersed, nor of portions joined together so that they can be dissolved; nor is it united together in a similar manner to our own bodies, for they have the seeds of decay in themselves, and they are subject to influence of a great variety of things by which they are at times injured; but the power of the world is invincible, since by its great superiority to other things it has dominion over everything.

Is it then destroyed by a complete destruction of its distinctive qualities? This again is impossible, for there remains, as the adversaries affirm, a quality of arrangement which by the process of conflagration is only diminished to a lesser substance ... Is it destroyed then by confusion? Away with such an idea,

for in that case it would be necessary to confess that the corruption of a body can be reduced to a state of non-existence. Why so? Because if each of the particular elements were destroyed separately, it would be possible for it to become changed into another; but if they are altogether destroyed at one and the same moment by confusion, then it would be necessary to imagine what is absolutely impossible.

Again, besides these arguments, if all things, say they, were destroyed by fire, then what will God have to do during all that time, except absolutely nothing? And is it not reasonable to say so? For at present, he overlooks and presides over everything, and regulates everything like a

genuine father, and if one is to say the truth, he guides and directs everything, sitting as it were by the side of the sun, and moon, and the other planets, and fixed stars, and also by the air, and the other parts of the world, and he co-operates with them in everything which can conduce to the durability of the universe and to its blameless management, in accordance with right reason.

But if everything is destroyed, then he will have an existence which will be rendered absolutely miserable, by inactivity and irremediable want of employment; than which what idea can be more absurd? I hesitate to add, what it would be impious to say, that death will ensue to God if absolute inactivity falls to his lot; for if you take away the perpetual motion of the soul, then you will beyond all question also destroy the soul itself. And the soul of the world, in the opinion of those who maintain the opposite doctrine, is God.

Chapter XVII

Is it not however worth while to examine this question, in what manner there can be a regeneration of all those things which have been destroyed by fire, and resolved into fire? for when their substance has been wholly destroyed by the fire, it follows of necessity that the fire itself must also be extinguished as no longer having any nourishment. Therefore, as long as it remained the seminal principle of arrangement was likewise preserved, but when it is destroyed that principle is destroyed with it. But it would be impious, and an impiety of double dye, not only to attribute destruction to the world, but also to take away the

possibility of its regeneration; as if God delighted in disorder, and irregularity, and all kinds of evil things.

But we must examine this question more accurately, in the following manner. There are three species in fire; the coal, and the flame, and the light. Now coal is the fire in its earthy substance, which, like a sort of spiritual habit, couches and lies hid in a sort of cavern, pervading it all to its very extremities. And the flame is that part which, being raised on high, is lifted up from its fuel. And the light is that which is emitted from the flame, so as to co-operate with the eyes, in order to enable them to comprehend what is seen. And the flame occupies the middle position between the coal and the light; for when it is extinguished it ends in coal, and when it is kindled it excites the light, which, being deprived of its burning power, blazes.

If therefore, we affirm that the world is dissolved by conflagration, it would not be coal, because, in that case there will be a great deal of the earthy substance left behind, in which also fire must necessarily be contained. But we must agree, that none of the other bodies subsist any longer, but that earth, and water, and air, are all dissolved into unmixed fire.

Nor, again, would it become flame; for that can only exist in connexion with nourishment; and, if nothing is left behind, being deprived of all nourishment it will immediately be extinguished. It follows from all this, that it cannot become light either; for light by itself has no substance at all, but flows from the things before mentioned, coal and flame, not in a great degree from the coal, but very much from the flame; for it is diffused over a

very great space indeed. But if, as has been already proved, those things had no existence from the conflagration of all things, then there could not be any light either. For the abundant, and vast, and extensive brilliancy of mid-day, when the sun proceeds under the earth, is at once caused to disappear by night, especially if it be a moonless night. Therefore the world is not destroyed by fire, but is indestructible. And if it should be destroyed by fire, there could not be another created.

Chapter XVIII

On which account some of the Stoics also, being gifted with a more acute discernment, and perceiving that they would infallibly be convicted, thought it well to be beforehand in preparing assistance as it were for a defunct proposition. But what they prepared was of no use; for, since fire is the cause of all motion, and since motion is the beginning of generation, for it is impossible that anything whatever should be generated without motion, they said that before the new world began to be formed, when it was beginning to be fashioned, the whole fire would not be extinguished in that conflagration; that they affirmed that some would still remain, but yet only a small portion. For they were exceedingly cautious, lest if it should be wholly extinguished, the consequence would be that everything would remain motionless and devoid of ornament, inasmuch as the cause of motion would no longer be in any existence.

But all these ideas are the invention of quibblers, who employ all their artifices in opposition to the truth. Why so? Because it is impossible, as has been proved already, that

the world, after it has been destroyed by conflagration, should become similar to coal, inasmuch as there is a vast quantity of earthy substance left in which the fire must of necessity lie in ambush. And perhaps too the conflagration could not prevail in every quarter, if the heaviest and most invincible of the elements, namely the earth, still remains, without being dissolved; but it must of necessity change, either into flame or into light: into flame, as Cleanthes thought; into light, as Chryssipus conceived.

But if it becomes flame, then, when it approaches extinction, it will be extinguished all at once, and not partially or gradually. For the nutriment exists along with it; on which account, while there is a great deal of it, it increases and is diffused; but when it is stunted it becomes less. And any one might conjecture the truth of what takes place from what he sees happen among us. A lamp, when any one pours oil upon it, gives forth a most brilliant flame; but when any one ceases to supply it with that nutriment, and leaves only a small portion in the lamp, then the lamp is at once extinguished, and does not give out the smallest portion of flame.

If again this is not the case, but if the world becomes light, then again it changes altogether. Why so? Because it has no substance or character of its own, but is generated from flame, and when this is wholly and completely extinguished in all its parts, it follows of necessity that the light also must be extinguished, and that not partially, but altogether. For what flame is to nourishment, that also is light to flame.

As therefore the flame is extinguished concurrently with the want of nourishment, so also is the light simultaneously with the flame, so that it is actually impossible for the world to be capable of regeneration, if there is no seminal principle lurking and kindled within it, but if all things are expended and destroyed, some by fire, and some by want. From all which arguments it is plain that the world is for ever uncreated and imperishable.

Chapter XIX

Nevertheless, as Chryssipus says, some suppose that fire resolves all the arrangement of the universe when the elements are separated into itself, so that it becomes the seed of the world which is about to be made; and suppose in consequence that, of all the ideas which he and his sect have entertained on the subject, none are falsified. Granting, in the first place, that generation proceeds from seed, and that all dissolution is a resolving back into seed; in the second place, because it is argued by natural philosophers that the world is a rational nature, inasmuch as it is not only possessed of life, but is also endowed with intellect, and moreover even with wisdom; by these arguments he establishes that contrary proposition to that which he intends, namely, that it will never be destroyed.

But the proofs are ready at hand to those who do not fear to join in the investigation. Therefore the world resembles either a plant or an animal. But whether it is a plant or whether it is an animal, still, if it be destroyed by conflagration, it will never be itself its own seed. And the circumstances which take place among ourselves bear

witness that nothing, whether great or less, when destroyed, has ever been separated in such a manner as to engender seed.

Do you not see how many materials of plants susceptible of cultivation there are, and how many kinds of wild plants too are diffused over every portion of the earth? Every one of these trees, as long as the trunk is in good health, together with its fruit, produces also a seed to propagate its species; but becoming destroyed after a lapse of time, and being wholly withered, roots and all, it never becomes resolved into a ripened seed.

And so too in the same manner the different kinds of animals, which it is not easy even to enumerate by reason of their multitude, as long as they survive and flourish vigorously, produce a seed, which is calculated to propagate their species; but when they are dead there is no longer any seed. For it would be absurd for a man when he is alive to employ only the eighth part of his soul, which is called the generative power, for the propagation of a being like himself, but after he is dead to exert the whole of himself for the same purpose; for death can never be more energetic or efficacious than life.

And besides, there is no single existing thing which is brought to perfection by seed alone without its appropriate nourishment. For seed resembles the beginning, and the beginning by itself does not make perfect; for beware of imagining that the ear of corn blossoms and ripens solely from the seed, which is cast by the husbandman on the ploughed field; for in truth, dryness and moisture, the twofold moisture which is derived from the earth,

co-operate in the greatest degree towards its growth. And so the creature which is fashioned in the womb is not permitted by nature to be brought to life and perfection by the seed alone, but also by the nourishment shed upon it from without, which the woman who has conceived supplies.

Why then do I say this? Because in the case of such a conflagration as that of which I have been speaking, the seed alone will be left, there being no nutriment remaining, since everything which was to have supplied nutriment will have been resolved into fire; so that the world, which would be to be formed, according to the principle of regeneration, will have a lame and imperfect form and character, since that which is chiefly required to co-operate towards its perfection, on which, as on a staff, the seminal origin ought to, and naturally does, lean, is destroyed; but this would be absurd, as is shown, and made manifest from the clearest evidence.

Again, all those things which derive their origin from seed are of a greater magnitude than the seed which gives them their existence, and are seen to fill a more extended space; for very often trees, whose tops reach to heaven itself, shoot up out of a very small grain of seed; and the fattest and tallest animals grow from a very small quantity of moisture, which is laid as their foundation; but there happens that which was mentioned a little while ago, that these, at the time nearest to their birth are very little, but that subsequently they keep on increasing in size till they arrive at complete perfection.

But in the case of the universe the exact contrary will take place, for here the seed will both be greater and will also fill a larger space; and the ultimate perfection at which the thing formed arrives will be smaller, and will appear in a smaller space; and the world, originally derived from a seed, will not progress from a very small thing towards increase, but, on the other hand, will be diminished from a greater magnitude to a smaller;

and it is easy to see the truth of what is here said. Every body, when it is resolved into fire, is dissolved, and melted, and diffused; and when the flame which is in it is extinguished, it is then contracted and shrunk up to nothing; but there is no need of arguments to prove a thing which is so clear, as if it were obscure; and, indeed, the world, if consumed by fire, will become greater, inasmuch as all its essence will then be dissolved into the thinnest air; and it appears to me that the Stoics have foreseen this, and on that account have, in their arguments, assumed that a vacuum of infinite extent will be left abandoned on the outside of the world; that so, since it is fated to be subjected to a certain diffusion of boundless extent, it may not be in want of a place which may be capable of receiving that diffusion.

When therefore it has been extended and increased to such a degree, as to be very nearly equal to the infinite extent of the vacuum by the boundless and illimitable extension of its own diffusion, it then, according to them, is itself the principle of seed to itself; but when, according to a perfect regeneration of the parts, its entire substance [...] (there seems a line or two lost here.) being contracted in

the extinction of the fire into dense air; but when the air again is contracted, and when it settles down into water, then again the water is still further condensed, so as to be changed into earth, which is the best of all the elements. But all these arguments are beyond the ordinary ideas of those who are able to consider and argue upon the consequences of these things.

Chapter XX

However, besides what has been here said, any one may use this argument also in corroboration of his opinion, which will certainly convince all those who are not determined to be obstinate beyond all bounds; of those things which in pairs are exactly contrary to one another it is impossible that one thing should be, and that the other should not be; for since there is white it follows as a matter of absolute necessity that there must also be black, and since there is a great there must likewise be a little; since there is an odd there must inevitably be an even; since there is a sweet there must be a bitter; since there is day there must be night; and so on in an infinite number of similar cases; but if a conflagration should take place, then something would ensue which is impossible; for then, of things in a pair, the one will happen and the other will not.

Come, now, let us consider the matter thus: if everything is resolved into fire, there is then something light, and rare, and warm; for all these are the especial properties of fire; but there can be nothing heavy, or cold, or thick, which are the opposites of the qualities which I have just enumerated. How then can any one more completely overturn the idea of

the universal disorder which would be involved in such a conflagration than by showing that those things which by a law of nature must exist together, are by this process separated from their natural conjunction? And the separation has extended to such a degree, that those who maintain this doctrine attribute eternal durability to the one and deny any existence at all to the other.

Again, there is this assertion made by some of those who diligently employ themselves in investigating truth which appears to me to be a sufficiently felicitous one; if the world is destroyed it will either be destroyed by some other efficient cause, or by God; now there is certainly nothing else whatever from which it can receive its destruction, for there is nothing whatever which it does not surround and contain; but that which is surrounded and confined within something else is manifestly inferior in power to that which surrounds and confines it, by which it is therefore mastered; on the other hand, to say that it is destroyed by God is the most impious of all possible assertions; for God is the cause not of disorder, and irregularity, and destruction, but of order, and beautiful regularity, and life, and of every good thing, as is confessed by all those whose opinions are based on truth.

Chapter XXI

But a person may very likely wonder at those who talk about conflagrations and regenerations, not only on account of the arguments which I have just been adducing, by which they are convicted of maintaining erroneous opinions, but also above all other reasons for this one; for since there are

four elements of which the world consists, namely, earth, water, air, and fire, why is it that they are to separate fire from all the others, and to affirm that all the others are dissolved into that one? For some one may say, if it is necessary that they should all be resolved into one, why should they not be resolved into air, or water, or earth? For these elements also contain powers of great magnitude; but yet no one has ever said that the world was to pass away into air, or into water, or into earth; so that it would be equally natural to deny that it is resolved into fire.

Moreover, it would have become them, perceiving the beautiful equality which exists in the world, to fear and to feel too great awe to venture to condemn so divine a thing to death; for there is a most admirable system of compensation existing in the four elements which arrange and dispense their vicissitudes by the rulers of equality, and the definitions of justice;

for as the seasons of the year, in their proper alternations of revolutions, go through their regular cycle, completing their periodical changes without any cessation; in the same manner suppose that the elements of the world in the course of their continual interchanges with one another (though it is a most paradoxical assertion), when they appear to be perishing are in reality being made immortal, passing over the same course again and again, so as to have their existence infinitely protracted.

Therefore the steep road begins with the earth; for when it is wasted away it endures a change to water, and the water when it has evaporated is changed into air, and the air when rarefied is changed into fire; but the downward

road descends from the head, when the fire in consequence of the conflagration which ensues settles down into air, and again when the air being closely pressed settles down into water, and when the water by its copious effusion is condensed so as to be changed into earth.

Heraclitus therefore spoke very correctly when he said that, "Water was the death of the soul, and earth the death of water." For thinking that the breath was the soul, he indicates, by this figurative and enigmatical expression, that the end of air is the production of water, and again that the end of water is the production of earth; and when he speaks of death he does not mean utter destruction, but a change into some other element;

that equalised proportion of the elements which is attempered by itself being thus preserved eternal and uninjured, as is not only probable but absolutely inevitable; since what is unequal is essentially unjust, and injustice is the offspring of wickedness, and wickedness is banished from the abode of immortality. But the world is of a divine magnitude, and has been shown to be the abode of those gods which are visible to the outward senses; and to affirm that this world is destroyed is the part of those who do not see the connection of nature and the united consequence and coherence of things.

Chapter XXII

But some of those persons who have fancied that the world is everlasting, inventing a variety of new arguments, employ also such a system of reasoning as this to establish their point: they affirm that there are four principal

manners in which corruption is brought about, addition, taking away, transposition, and alteration; accordingly, the number two is by the addition of the unit corrupted so as to become the number three, and no longer remains the number two; and the number four by the taking away of the unit is corrupted so as to become the number three; again, by transposition the letter Z becomes the letter H when the parallel lines which were previously horizontal are placed perpendicularly II, and when the line which did before pass upwards, so as to connect the two is now made horizontal, and still extended between them so as to join them. And by alteration the word oinos, wine, becomes oxos, vinegar.

But of the manner of corruption thus mentioned there is not one which is in the least degree whatever applicable to the world, since otherwise what could we say? Could we affirm that anything is added to the world so as to cause its destruction? But there is nothing whatever outside of the world which is not a portion of it as the whole, for everything is surrounded, and contained, and mastered by it. Again, can we say that anything is taken from the world so as to have that effect? In the first place that which would be taken away would again be a world of smaller dimensions than the existing one, and in the second place it is impossible that any body could be separated from the composite fabric of the whole world so as to be completely dispersed.

Again, are we to say that the constituent parts of the world are transposed? But at all events they remain in their original positions without any change of place, for never at any time shall the whole earth be raised up above the water,

nor the water above the air, nor the air above the fire. But those things which are by nature heavy, namely the earth and the water, will have the middle place, the earth supporting everything like a solid foundation, and the water being above it; and the air and the fire, which are by nature light, will have the higher position, but not equally, for the air is the vehicle of the fire; and that which is carried by anything is of necessity above that which carries it.

Once more: we must not imagine that the world is destroyed by alteration, for the change of any elements is equipollent, and that which is equipollent is the cause of unvarying steadiness, and of untroubled durability, inasmuch as it neither seeks any advantage itself, and is not subject to the inroads of other things which seek advantages at its expense; so that this retribution and compensation of these powers is equalized by the rules of proportion, being the produce of health and endless preservation, by all which considerations the world is demonstrated to be eternal.

Chapter XXIII

Theophrastus, moreover, says that those men who attribute a beginning and destructibility to the world are deceived by four particulars of the greatest importance, the inequalities of the earth, the retreat of the sea, and dissolution of each of the parts of the universe, and the destruction of different terrestrial animals in their kinds;

and he proceeds to establish the first point thus: if the earth had never had any beginning of its creation, then there would have been no portion of it rising above the rest

so as to be conspicuous, but all the mountains would have been level, and all the pieces of rising ground would have been even with the plain. For as there are such vast showers falling from heaven throughout all ages, it would be natural that of any places which were originally raised on high some would be broken down and washed away by torrents, and others would subside of their own accord and so become lowered, and that every place everywhere would be smoothed;

but now, as things are, the constant inequalities which exist, and the vast heights of many mountains, reaching up even to the sky, are so many proofs that the earth is not eternal. For otherwise, as I have said before, all the earth would long since have been rendered level from one extremity to the other by the vast rains which would have fallen from the eternal commencement of time; for it is the character of the nature of water, and especially of such as descends in a heavy fall from lofty places, to push some things away by force, and to cut out and hollow other places by its continual dropping, and in this manner to operate on the hard, rugged, stony ground not less than men digging.

And again, the sea, as they affirm, is already somewhat diminished, and for proof of this fact we can appeal to the most celebrated islands, Rhodes and Delos, for these were in ancient times invisible, being overwhelmed by and sunk under the sea, but by lapse of time, as the sea gradually diminished, they by slow degrees rose above it and came into sight, as the histories which are written concerning them record.

And they used to call Delos Anaphe, confirming the account here given by both names, since when it appeared above the Waters(the Greek word is anaphaneisa, from which Anapheῖ is derived.) it became evident, (depleῖ, from which Deplos is derived.) having been formerly invisible and Unseen.(yonge's translation places the following excerpt after section 122. Present arrangement reflects the Loeb sequence.) On which account Pindar says respecting Delos

And in addition to these arguments they adduce the facts that many great and deep bays and gulfs of vast seas have been dried up, and have become land, and have so turned out no insignificant addition to the adjacent country when sown and planted, and on that soil there is still left plenty of proof of such spots having formerly been sea, in the pebbles, and shells, and other things which are commonly washed up on the sea-shore being found in them.

But if the sea is gradually being diminished then the earth also will be diminished; and in long revolutions of years every one of the elements will be entirely consumed and destroyed; and the whole air will be consumed, being diminished by little and little; and all things will be absorbed and dissolved into the one substance of fire.

Chapter XXIV

And for the purpose of establishing the third alternative of this question they use the following argument: beyond all question that thing is destroyed all the parts of which are liable to destruction; but all the parts of the world are liable to destruction, therefore the world also is liable to

destruction.

But we must now proceed to consider the question which we postponed till the present time. What sort of a part of the earth is that, that we may begin from this, whether it is greater or less, that is not dissolved by time? Do not the very hardest and strongest stones become hard and decayed through the weakness of their conformation (and this conformation is a sort of course of a highly strained spirit, a bond not indissoluble, but only very difficult to unloose), in consequence of which they are broken up and made fluid, so that they are dissolved first of all into a thin dust, and afterwards are wholly wasted away and destroyed? Again, if the water were never agitated by the winds, but were left immoveable for ever, would it not from inaction and tranquillity become dead? at all events it is changed by such stagnation, and becomes very foetid and foul-smelling, like an animal deprived of life.

And so also the corruptions of the air are plain to everyone, for it is the nature of the atmosphere to become sick and to decay, and, as one may say, in a manner to die; since what else is it which a man, who is not aiming at selecting plausible language, but only at truth, would call a plague except a death of the atmosphere, which diffuses its own disease and suffering to the destruction of everything which is endowed with life?

And why need I speak at great length concerning fire? for if it is deprived of nourishment it is immediately extinguished, becoming, as the poets say, tame by its own natural qualities, on which account it depends upon, and is raised up by the duration of the fuel which is supplied and

kindled, but when that is expended the fire also disappears.

And they say that the dragons in India are exposed to the same kind of fate, for that they crawl upon the greatest of all beasts, namely elephants, and creep over their backs and the whole of their bellies, and then, if they can find a vein, they divide that and drink the blood, sucking it insatiably, with a strong breath and a vigorous noise. Meantime the elephants, though greatly drained, and though becoming gradually exhausted, hold out for some time, leaping about in their perplexity, and lashing their sides with their trunks in the hope of being able to shake off the dragons. After a time, as the vital principle is continually becoming more and more exhausted, they are no longer able to leap about, but stand trembling and quivering, and after a little more time their legs become too weak to support them, and they are thrown down and die for want of blood. And when they are fallen down those animals which were the causes of their death die with them in the following manner:

since the dragons have no longer any nourishment, they attempt to loosen the bonds with which they twined themselves round the elephants, wishing now to get released from them, but they are pressed down by the weight of the elephants and crushed, and much more so when the animal has become a lifeless, hard, and stone-like substance; for though they wriggle about and try every expedient in order to effect their release from the power of the animal which weighs them down, and by which they are entangled, though they have long practised themselves in every variety of wile, amid all kinds of difficulties and distresses, they at last become too weak to resist, like men

who have been starved to death, or who have been caught by a wall which has suddenly fallen down upon them, and not being able even to lift up their heads they die of suffocation. If then, each of the separate parts of the world awaits utter destruction, it is plain that the world which is compounded of these can not be itself exempt from destruction.

We must now consider with accuracy the fourth and remaining argument. Thus they argue: if the world were eternal then the animals also would be eternal, and much more the human race, in proportion as that is more excellent than the other animals; but, on the contrary, those who take delight in investigating the mysteries of nature consider that man has only been created in the late ages of the world; for it is likely, or I should rather say it is inevitably true, that the arts co-exist with man, so as to be exactly co-eval with him, not only because methodical proceedings are appropriate to a rational nature, but also because it is not possible to live without them;

let us therefore examine the dates of each of these, disregarding the fables invented by the tragedians about the gods; but if man is not eternal then neither is any other animal, so that then neither are the places which receive them, the earth, or the water, or the air; from all which considerations it is plain that this world is liable to destruction.

Chapter XXV

But it is necessary to encounter such quibbling arguments as these, lest some persons of too little

experience should yield to and be led away by them; and we must begin our refutation of them from the same point from which the Sophists begin their deceit. They say, "There could no longer be any inequalities existing on the earth, if the world were eternal." Why not, my most excellent friends? For other persons will come up and say that the natures of trees are in no respect different from mountains; but just as they at certain seasons lose their leaves, and again at certain seasons recover their verdure again; (on which account there is admirable truth in those lines of the poet: —

but after a long lapse of time the additional growth becomes conspicuous because the trees having a more rapid nature, display their increase with great rapidity; but mountains have a slower character, on which account it happens that the additions which take place in their case are not perceptible by the outward senses except after a long time.

And these men appear to be ignorant of the manner in which they are produced, since if they had not been, perhaps they would have been silent out of shame; but still there is no reason why we should not teach them; but there is nothing new in what is now said, neither are they our words but the ancient sayings of wise men, by whom nothing which was necessary for knowledge has been left uninvestigated;

when the fiery principle which is contained beneath, in the earth, is thrust upwards by the natural power of fire, it proceeds to its own appropriate place; and if it meets with any respite or relaxation, though ever so slight, it draws up

with it a large portion of the earthy substance, as much as it can; and when it has emerged from the earth it proceeds more slowly; but the earthy substance being compelled to follow it for a long time, being at last raised to an immense height, is contracted at the top, and at last comes to end on a sharp point imitating the general appearance of the flame of fire;

for there arises then a most violent contention between two things which are natural adversaries, the lightest and the heaviest of things, each of them pressing onwards to reach its own place, and each striving against the violent efforts of the other; accordingly the fire, which is drawing up the earth with it, is compelled to sink down by its descending power; and the earth naturally inclining to the lowest point is nevertheless to a certain degree made light, and lifted up by the upward tendencies of fire, and so is raised on high, and being at last overpowered by the more influential power which lightens it is thrust upwards towards the natural seat of fire, and established on high.

Why then need we wonder if the mountains are not entirely washed away by the impetuosity of the rains, when so great a power, which keeps them together, and by which they are raised up, is very firmly and steadfastly connected with them? For if they were released from the bond which holds them together, it would be natural for them to be entirely dissolved and to be dispersed by the water; but since they are bound together by this power of fire, they resist the impetuosity of the rains more surely.

but with respect to that argument which was endeavoured to be established by the diminution of the sea,

we may reasonably adduce this statement in opposition to it: "Do not look only at the islands which have risen up out of the sea, nor at any portions of land which, having been formerly buried by the waters, have in subsequent times become dry land; for obstinate contention is very unfavourable to the consideration of natural philosophy, which considers the search after truth to be the chief object of rational desire; but look rather at the contrary effects: consider how many districts on the main-land, not only such as were near the coast, but even such as were completely in-land, have been swallowed up by the waters; and consider how great a portion of land has become sea and is now sailed over by innumerable ships."

Are you ignorant of the celebrated account which is given of that most sacred Sicilian strait, which in old times joined Sicily to the continent of Italy?(this is alluded to by Virgil, *Aen.* 3.419 (as it is translated by Dryden)— "The Italian shore / And fair Sicilia's coast were one before / An earthquake caused the flaw; the roaring tides / The passage broke that land from land divides, / And where the lands retired the rushing ocean rides / Distinguished by the straits on either hand / Now rising cities in long order stand, / And fruitful fields; so much can time invade / The mouldering work that beauteous nature made.") and where vast seas on each side being excited by violent storms met together, coming from opposite directions, the land between them was overwhelmed and broken away; from which circumstance the city built in the neighbourhood was called Rhegium, (*rheugion*, from *rheugnymi*, "to break.") and the result was quite different from what any one would have expected; for the seas which had formerly been separated

now flowed together and were united in one expanse; and the land which had previously united was now separated into two portions by the strait which intersected it, in consequence of which Sicily, which had previously formed a part of the mainland, was now compelled to be an island.

And it is said that many other cities also have disappeared, having been swallowed up by the sea which overwhelmed them; since they speak of three in Peloponnesus —

And the island of Atalantes which was greater than Africa and Asia, as Plato says in the *Timaeus*, in one day and night was overwhelmed beneath the sea in consequence of an extraordinary earthquake and inundation and suddenly disappeared, becoming sea, not indeed navigable, but full of gulfs and eddies.

Therefore that imaginary and fictitious diminution of the sea has no connection with the destruction or durability of the world; for in fact it appears to recede indeed from some parts, but to rise higher in others; and it would have been proper rather not to look at only one of these results but at both together, and so to form one's opinion, since in all the disputed questions which arise in human life, a wise and honest judge will not deliver his opinion before he has heard the arguments of the advocates on both sides.

Chapter XVII

And as for the third argument, it is convicted by itself, as being derived only from an unsound system of questioning proceeding from the assertions originally made; for in truth it does not necessarily follow that a thing, all the parts of

which are liable to corruption, is likewise perishable itself; but this is only inevitably true of that thing of which all the parts are perishable when taken collectively and together in the same place and at the same time, since in the case of a person who has the tip of his finger cut off, he is not disabled from living, but if he had the whole collection of all his parts and limbs cut off at once, he would die immediately.

Therefore in the same manner, if all the elements of the world together were all to disappear at one and the same moment, then it would be necessary to admit that the world was liable to corruption and destruction; but if each of these elements separately only changes its nature so as to assimilate to that of its nature, it is then rendered immortal rather than destroyed, according to the philosophical statement of the tragic poet —

For it is the greatest folly imaginable to estimate the antiquity of the human race from the state of art; for if any one were to follow the absurdity of such a system of reasoning as this, he will prove the world to be very young indeed, and to have been made scarcely a thousand years, since all those men whom we have heard of traditionally as the discoverers in different branches of science do not go back to a greater number of years than that which I have mentioned.

But if we must speak of the arts as coeval with the race of mankind, then we must speak, drawing our arguments from natural history, and not inconsiderately or carelessly. And what is this history? The destruction of the things on the earth, not all together, but of the greatest number of them,

is attributed to two principal causes, the indescribable violence and power of fire and water. And they say that each of these elements attacks them in its turn, after very long periods of revolving years.

When, therefore, a conflagration seizes upon things, a stream of ethereal fire being poured down from above is frequently diffused over them, overrunning many districts of the habitable world; and when a deluge draws down the whole of the rainy nature of water, the regular rivers and torrents overflowing, and not only that, but even far exceeding the ordinary measure of a common flood, and breaking down their banks with their violence, or else overleaping them, and rising to an enormous height, from which they swell and are diffused over all the adjacent champaign country, and the land is in the first instance divided into huge lakes, as the water is continually settling down into the more hollow parts, and afterwards flows still higher, and inundates the isthmuses which separate the lakes, till at last everything presents the appearing of one vast sea from the union of so many waters.

And then it happens that, through the violence of these powers contending against one another in turn, the inhabitants of the places exposed to it are destroyed; those who dwell on the mountains and higher ground, and in ill-watered districts, being destroyed by fire, as not having a sufficiency of water, which is the natural weapon with which to repel fire, and those, on the other hand, being destroyed by water who live on the banks of rivers or lakes, or on the shores of the sea, for evils like to attack those who are nearest first, or indeed solely.

Accordingly, when the greater part of mankind is destroyed in the manners above mentioned, besides an infinity of other ways of less power and importance, it follows of necessity that the arts also must fail, for it cannot be possible to discuss science by itself without some one to reduce it to method and practice. But when those common pestilences relax their fury, and when the human race begins again to recover vigour and to flourish, descending from those who have not been previously destroyed by the evils which pressed upon them, then the arts also begin again to exist, not indeed as they were at first, but in thinner numbers from the diminution of the numbers of those who practise them.

I have now then set forth to the best of my ability what I have been able to learn or to understand concerning the indestructibility of the world, and in the subsequent treatises I shall proceed to show what may be said against each of the arguments here stated.