

On the Nature of the Universe

Ocellus Lucanus



Chapter I

Ocellus Lucanus has written what follows concerning the Nature of the Universe; having learnt some things through clear arguments from Nature herself, but others from opinion, in conjunction with reason, it being his intention [in this work] to derive what is probable from intellectual perception.

It appears, therefore, to me, that the Universe is indestructible and unbegotten, since it always was, and always will be; for if it had a temporal beginning, it would not have always existed: thus, therefore, the universe is unbegotten and indestructible; for if some one should opine that it was once generated, he would not be able to find anything into which it can be corrupted and dissolved, since that from which it was generated would be the first part of the universe; and again, that into which it would be dissolved would be the last part of it.

But if the universe was generated, it was generated together with all things; and if it should be corrupted, it would be corrupted together with all things. This, however, is impossible. The universe, therefore, is without a beginning, and without an end, nor is it possible that it can have any "other mode of subsistence.

To which may be added, that everything which has received a beginning of generation, and which ought also to participate of dissolution, receives two mutations; one of which, indeed, proceeds from the less to the greater, and from the worse to the better; and that from which it begins to change is denominated generation, but that at which it at length arrives, is called acme. The other mutation, however, proceeds from the greater to the less, and from the better to the worse: but the termination of this mutation is denominated

corruption and dissolution.

If, therefore, the whole and the universe were generated, and are corruptible, they must, when generated, have been changed from the less to the greater, and from the worse to the better; but when corrupted, they must be changed from the greater to the less, and from the better to the worse. Hence, if the world was generated, it would receive increase, and would arrive at its acme; and again, it would afterwards receive decrease and an end. For every nature which has a progression, possesses three boundaries and two intervals. The three boundaries, therefore, are generation, acme, and end; but the intervals are, the progression from generation to acme, and from acme to the end.

The whole, however, and the universe, affords, as from itself, no indication of a thing of this kind; for neither do we perceive it rising into existence, or becoming to be, nor changing to the better and the greater, nor becoming at a certain time worse or less; but it always continues to subsist in the same and a similar manner, and is itself perpetually equal and similar to itself.

Of the truth of this, the orders of things, their symmetry, figurations, positions, intervals, powers, | swiftiness and slowness with respect to each other; and, besides these, their numbers and temporal periods, are clear signs and indications. For all] such things as these receive mutation and diminution, conformably to the course of a generated nature: for things that are greater and better acquire acme through power, but those that are less and worse are corrupted through imbecility of nature. I denominate, however, the whole and the universe, the whole world; for, in consequence of being adorned with all things, it has obtained this appellation; since it is from itself a consummate and perfect system of the nature of all things; for there is nothing external to the universe, since whatever exists is contained in the universe, and the universe subsists together with this, comprehending in itself all things, some as parts, but others as supervenient. Those things, therefore, which are comprehended in the world, have a congruity with the world; but the world has no concinnity with anything else, but is itself co-harmonized with itself. For all other things have not a consummate or self-perfect subsistence, but require congruity with things external to themselves. Thus animals require a conjunction with air for the purpose of respiration, but sight with light, in order to see; and the other senses with something else, in order to perceive their peculiar sensible object. A conjunction with the earth also is necessary to

the germination of plants. The sun and moon, the planets, and the fixed stars, have likewise a coalescence with the world, as being parts of its common arrangement. The world, however, has not a conjunction with anything else than itself. Further still, what has been said will be easily known to be true from the following considerations. 1. Fire, which imparts heat to another thing, is itself from itself hot; and honey, which is sweet to the taste, is itself from itself sweet. The principles likewise of demonstrations, which are indicative of things unapparent, are themselves from themselves manifest and known. Thus, also, that which becomes to other things the cause of self-perfection, is itself from itself perfect; and that which becomes to other things the cause of preservation and permanency, is itself from itself preserved and permanent. That, likewise, which becomes to other things the cause of concinnity, is itself from itself co-harmonized; but the world is to other things the cause of their existence, preservation, and self-perfection. The world, therefore, is from itself perpetual and self-perfect, has an everlasting duration, and on this very account becomes the cause of the permanency of the whole of things.

In short, if the universe should be dissolved, it - would either be dissolved into that which has an existence, or into nonentity. But it is impossible that it should be dissolved into that which exists, for there will not be a corruption of the universe if it should be dissolved into that which has a being; for being is either the universe, or a certain part of the universe. Nor can it be dissolved into nonentity, since it is impossible for being either to be produced from non-beings, or to be dissolved into nonentity. The universe, therefore, is incorruptible, and can never be destroyed.

If, nevertheless, some one should think that it may be corrupted, it must either be corrupted from something external to, or contained in the universe, but it cannot be corrupted by anything external to it; for there is not anything external to the universe, since all other things are comprehended in the universe, and the world is the whole and the all. Nor can it be corrupted by the things which it contains, for in this case it will be requisite that these should be greater and more powerful than the universe. This, however, is not true, for all things are led and governed by the universe, and conformably to this are preserved and co-adapted, and possess life and soul. But if the universe can neither be corrupted by anything external to it, nor by anything contained

within it, the world must therefore be incorruptible and indestructible; for we consider the world to be the same with the universe.

Further still, the whole of nature surveyed through the whole of itself, will be found to derive continuity from the first and most honourable of bodies, attenuating this continuity proportionally, introducing it to everything mortal, and receiving the progression of its peculiar subsistence; for the first [and most honourable] bodies in the universe, revolve according to the same, and after a similar manner. The progression, however, of the whole of nature, is not successive and continued, nor yet local, but subsists according to mutation.

Fire, indeed, when it is congregated into one thing, generates air, but air generates water, and water earth. From earth, also, there is the same circuit of mutation, as far as to fire, from whence it began to be changed. But fruits, and most plants that derive their origin from a root, receive the beginning of their generation from seeds. When, however, they bear fruit and arrive at maturity, again they are resolved into seed, nature producing a complete circulation from the same to the same.

But men and other animals, in a subordinate degree, change the universal boundary of nature; for in these there is no periodical return to the first age, nor is there an antiperistasis of mutation into each other, as there is in fire and air, water and earth; but the mutations of their ages being accomplished in a four-fold circle, they are dissolved, and again return to existence; these, therefore, are the signs and indications that the universe, which comprehends [all things], will always endure and be preserved, but that its parts, and such things in it as are supervenient, are corrupted and dissolved.

Further still, it is credible that the universe is without a beginning, and without an end, from its figure, from motion, from time, and its essence; and, therefore, it may be concluded that the world is unbegotten and incorruptible: for the form of its figure is circular; but a circle is on all sides similar and equal, and is therefore without a beginning, and without an end. The motion also of the universe is circular, but this motion is stable and without transition. 'Time, likewise, in which motion exists is infinite, for this neither had a beginning, nor will have an end of its circulation. The essence, too, of the universe, is without egression [into any other place], and is immutable,

because it is not naturally adapted to be changed, either from the worse to the better, or from the better to the worse. From all these arguments, therefore, it is obviously credible, that the world is unbegotten and incorruptible. And thus much concerning the whole and the universe.

Chapter II

Since, however, in the universe, one thing is generation, but another the cause of generation; and generation indeed takes place where there is a mutation and an egression from things which rank as subjects; but the cause of generation then subsists where the subject matter remains the same: this being the case, it is evident that the cause of generation possesses both an effective and motive power, but that the recipient of generation is adapted to passivity, and to be moved.

But the Fates themselves distinguish and separate the impassive part of the world from that which is perpetually, moved [or mutable]. For the course of the moon is the isthmus of immortality and generation. The region, indeed, above the moon, and also that which the moon occupies, contain the genus of the gods; but the place beneath the moon is the abode of strife and nature; for in this place there is a mutation of things that are generated, and a regeneration of things which have perished.

In that part of the world, however, in which nature and generation predominate, it is necessary that the three following things should be present. In the first place, the body which yields to the touch, and which is the subject of all generated natures. But this will be an universal recipient, and a signature of generation itself, having the same relation to the things that are generated from it, as water to taste, silence to sound, darkness to light, and the matter of artificial forms to the forms themselves. For water is tasteless and devoid of quality, yet is capable of receiving the sweet and the bitter, the sharp and the salt. Air, also, which is formless with respect to sound, is the recipient of words and melody. And darkness, which is without colour, and without form, becomes the recipient of splendour, and of the yellow colour and the white; but whiteness pertains to the statuary's art, and to the art which fashions figures from wax. Matter, however, has a relation in a different manner to the statuary's art; for in matter all things prior to generation are in capacity, but

they exist in perfection when they are generated and receive their proper nature. Hence matter [or a universal recipient] is necessary to the existence of generation.

The second thing which is necessary, is the existence of contrarieties, in order that mutations and changes in quality may be effected, matter for this purpose receiving passive qualities, and an aptitude to the participation of forms. Contrariety is also necessary, in order that powers, which are naturally mutually repugnant, may not finally vanquish, or be vanquished by, each other. But these powers are the hot and the cold, the dry and the moist.

Essences rank in the third place; and these are fire and water, air and earth, of which the hot and the cold, the dry and the moist, are powers. But essences differ from powers; for essences are locally corrupted by each other, but powers are neither corrupted nor generated, for the reasons [or forms] of them are incorporeal.

Of these four powers, however, the hot and the cold subsist as causes and things of an effective nature, but the dry and the moist rank as matter; and things that are passive; but matter is the first recipient of all things, for it is that which is in common spread under all things. Hence, the body, which is the object of sense in capacity, and ranks as a principle, is the first thing; but contrarieties, such as heat and cold, moisture and dryness, form the second thing; and fire and water, earth and air, have an arrangement in the third place. For these change into each other; but things of a contrary nature are without change.

But the differences of bodies are two: for some of them indeed are primary, but others originate from these: for the hot and the cold, the moist and the dry, rank as primary differences; but the heavy and the light, the dense and the rare, have the relation of things which are produced from the primary differences. All of them, however, are in number sixteen, viz. the hot and the cold, the moist and the dry, the heavy and the light, the rare and the dense, the smooth and the rough, the hard and the soft, the thin and the thick, the acute and the obtuse. But of all these, the touch has a knowledge, and forms a judgement; hence, also, the first body in which these differences exist in capacity, may be sensibly apprehended by the touch.

The hot and the dry, therefore, the rare and the sharp, are the powers of fire; but those of water are, the cold and the moist, the dense and the obtuse; those of air are, the soft, the smooth, the light, and the attenuated; and those of earth are, the hard and the rough, the heavy and the thick.

Of these four bodies, however, fire and earth are: the transcendencies and summits [or extremities] of contraries. Fire, therefore, is the transcendency of heat, in the same manner as ice is of cold: hence, if ice is a concretion of moisture and frigidity, fire will be the fervour of dryness and heat. On which account, nothing is generated from ice, nor from fire.

Fire and earth, therefore, are the extremities of the elements, but water and air are the media, for they have a mixed corporeal nature. Nor is it possible that there could be only one of the extremes, but it is necessary that there should be a contrary to it. Nor could there be two only, for it is necessary that there should be a medium, since media are opposite to the extremes.

Fire, therefore, is hot and dry, but air is hot and moist; water is moist and cold, but earth is cold and dry. Hence, heat is common to air and fire; cold is common to water and earth; dryness to earth and fire; and moisture to water and air.

But with respect to the peculiarities of each, heat is the peculiarity of fire, dryness of earth, moisture of air, and frigidity of water. The essences, therefore, of these remain permanent, through the possession of common properties; but they change through such as are peculiar, when one contrary vanquishes another.

Hence, when the moisture in air vanquishes the dryness in fire, but the frigidity in water, the heat in air, and the dryness in earth, the moisture in water, and vice versa, when the moisture in water vanquishes the dryness in earth, the heat in air, the coldness in water, and the dryness in fire, the moisture in air, then the mutations and generations of the elements from each other into each other are effected.:

The body, however, which is the subject and recipient of mutations, is a universal receptacle, and is in capacity the first tangible substance.

But the mutations of the elements are effected, either from a change of earth into fire, or from fire into air, or from air into water, or from water into earth. Mutation is also effected in the third place, when that which is contrary in

each element is corrupted, but that which is of a kindred nature, — and connascent, is preserved. Generation, therefore, is effected, when one contrariety is corrupted. For fire, indeed, is hot and dry, but air is hot and moist, and heat is common to both; but the peculiarity of fire is dryness, and of air moisture. Hence, when the moisture in air vanquishes the dryness in fire, then fire is changed into air.

Again, since water is moist and cold, but air is moist and hot, moisture is common to both. The peculiarity however of water is coldness, but of air heat. When, therefore, the coldness in water vanquishes the heat in air, the mutation from air into water is effected.

Further still, earth is cold and dry, but water is cold and moist, and coldness is common to both; but the peculiarity of earth is dryness, and of water moisture. When, therefore, the dryness in earth vanquishes the moisture in water, a mutation takes place from water into earth. / The mutation, however, from earth, in an ascending progression, is performed in a contrary way; but an alternate mutation is effected when one whole vanquishes another, and two contrary powers are corrupted, nothing at the same time being common to them. For since fire is hot and dry, but water is cold and moist; when the moisture in water vanquishes the dryness in fire, and the coldness in water the heat in fire, then a mutation is effected from fire into water.

Again, earth is cold and dry, but air is hot and moist. When, therefore, the coldness in earth vanquishes the heat in air, and the dryness in earth, the moisture in air, then a mutation from air into earth is effected.

But when the moisture of air corrupts the heat of fire, from both of them fire will be generated; for the heat of air and the dryness of fire will still remain. And fire is hot and dry.

When, however, the coldness of earth is corrupted, and the moisture of water, from both of them earth will be generated. For the dryness of earth, indeed, will be left, and the coldness of water. And earth is cold and dry.

But when the heat of air, and the heat of fire are corrupted, no element will be generated; for the contraries in both these will remain, viz. the moisture of air and the dryness of fire. Moisture, however, is contrary to dryness.

And again, when the coldness of earth, and in a similar manner of water, are corrupted, neither thus will there be any generation; for the dryness of earth

and the moisture of water will remain. But dryness is contrary to moisture. And thus, we have briefly discussed the generation of the first bodies, and have shown how and from what subjects it is effected.

Since, however, the world is indestructible and unbegotten, and neither received a beginning of generation, nor will ever have an end, it is necessary that the nature which produces generation in ~ another thing, and also that which generates in itself, should be present with each other. And that, - indeed, which produces generation in another thing, is the whole of the region above the moon; but the more proximate cause is the sun, who, by his accessions and recessions, continually changes the air, so as to cause it to be at one time cold, and at another hot; the consequence of which is, that the earth is changed, and everything which the earth contains.

The obliquity of the zodiac, also, is well posited with respect to the motion of the sun, for it likewise is the cause of generation. And universally this is accomplished by the proper order of the universe; so that one thing in it is that which makes, but another that which is passive. Hence, that which generates in another thing, exists above the moon; but that which generates in itself, has a subsistence beneath the moon; and that which consists of both these, viz. of an ever-running divine body, and of an ever-mutable generated nature, is the world. ty 23

Chapter III

The origin, however, of the generation of man was not derived from the earth, nor that of other animals, nor of plants; but the proper order of the world being perpetual, it is also necessary that the natures which exist in it, and are aptly arranged, should, together with it, have a neverfailing subsistence. For the world primarily always existing, it is necessary that its parts should be co-existent with it: but I mean by its parts, the heavens, the earth, and that which subsists between these; which is placed on high, and is denominated aerial; for the world does not exist without, but together with, and from these.

The parts of the world, however, being consubsistent, it is also necessary that the natures, comprehended in these parts, should be co-existent. with them; with the heavens, indeed, the sun and moon, the fixed stars, and the planets; but with the earth, animals and plants, gold and silver; with the place on high,

and the aerial region, pneumatic substances and wind, a mutation to that which is more hot, and a mutation to that which is more cold; for it is the property of the heavens to subsist in conjunction with the natures which it comprehends; of the earth to support the plants and animals which originate from it; and of the “place on high, and the aerial region, to be consubsistent with all the natures that are generated in it. - Since, therefore, in each division of the world, a certain genus of animals is arranged, which surpasses the rest contained in that division; in the heavens, indeed, the genus of the gods, but in the earth men, and in the region on high demons;— this being the case, it is necessary that the race of men should be perpetual, since reason truly induces us to believe, that not only the [great] parts of the world are consubsistent with the world, but also the natures comprehended in these parts.

Violent corruptions, however, and mutations, take place in the parts of the earth; at one time, indeed, the sea overflowing into another part of the earth; but at another, the earth itself becoming dilated and divulsed, through wind or water latently entering into it. But an entire corruption of the arrangement of the whole earth never did happen, nor ever will.

Hence the assertion, that the Grecian history derived its beginning from the Argive Inachus, must not be admitted as if it commenced from a certain first principle, but that it originated from some mutation which happened in Greece; for Greece has frequently been, and will again be, barbarous, not only from the migration of foreigners into it, but from nature herself, which, though she does not become greater or less, yet is always younger, and with reference to us, receives a beginning.

And thus much has been sufficiently said by me respecting the whole and the universe; and further still, concerning the generation and corruption of the natures which are generated in it, and the manner in which they subsist, and will for ever subsist; one part of the universe consisting of a nature which is perpetually moved, but another part of a nature which is always passive; and the former of these always governing, but the latter being always governed.

Chapter IV

Concerning the generation of men, however, from each other, after what manner, and from what particulars, it may be most properly effected, law, and

temperance and piety at the same time cooperating, will be, I think, as follows. In the first place, indeed, this must be admitted,—that we should not be connected with women for the sake of pleasure, but for the sake of begetting children.

For those powers and instruments, and appetites, which are subservient to copulation, were imparted to men by Divinity, not for the sake of voluptuousness, but for the sake of the perpetual duration of the human race. For since it was impossible that man, who is born mortal, should participate of a divine life, if the immortality of his genus was corrupted; Divinity gave completion to this immortality through individuals, and made this generation of mankind to be unceasing and continued. This, therefore, is one of the first things which it is necessary to survey,—that copulation should not be undertaken for the sake of voluptuous delight.

In the next place, the co-ordination itself of man should be considered with reference to the whole, viz. that he is a part of a house and a city, and (which is the greatest thing of all) that each of the progeny of the human species ought to give completion to the world, if it does not intend to be a deserter either of the domestic, or political, or divine Vestal hearth.

For those who are not entirely connected with each other for the sake of begetting children, injure the most honourable system of convention. But if persons of this description procreate with libidinous insolence and intemperance, their offspring will be miserable and flagitious, and will be execrated by gods and demons, and by men, and families, and cities.

Those, therefore, who deliberately consider these things, ought not, in a way similar to irrational animals, to engage in venereal connections, but should think copulation to be a necessary good. For it is the opinion of worthy men, that it is necessary and beautiful, not only to fill houses with large families, and also the greater part of the earth, (for man is the most mild and the best of all animals,) but, as a thing of the greatest consequence, to cause them to abound with the most excellent men.

For on this account men inhabit cities governed by the best laws, rightly manage their domestic affairs, and {if they are able} impart to their friends such political employments as are conformable to the politics in which they live, since they not only provide for the multitude at large, but [especially] for

worthy men.

Hence, many err, who enter into the connubial state without regarding the magnitude of [the power of] fortune, or public utility, but direct their attention to wealth, or dignity of birth. For, in consequence of this, instead of uniting with females who are young and in the flower of their age, they become connected with extremely old first in domestic sway, is unable, in the management of his family, to take the lead.

This being the case, it happens that not only families, but cities, become miserable. For families are parts of cities, but the composition of the whole and the universe derives its subsistence from parts. It is reasonable, therefore, to admit, that such as are the parts, such likewise will be the whole and the all which consists of things of this kind.

And as in fabrics of a primary nature the first structures co-operate greatly to the good or bad completion of the whole work; as, for instance, the manner in which the foundation is laid in building a house, the structure of the keel in building a ship, and in musical modulation the extension and remission of the voice; so the concordant condition of families greatly contributes to the | well or ill establishment of a polity.

Those, therefore, who direct their attention to the propagation of the human species, ought to guard against everything which is dissimilar and imperfect; for neither plants nor animals, when imperfect, are prolific, but to their fructification a certain portion of time is necessary, in order that when the bodies are strong and perfect, they may produce seeds and fruits.

Hence, it is necessary that boys, and girls also while they are virgins, should be trained up in exercises and proper endurance, and that they should be nourished with that kind of food, which is adapted to a laborious, temperate, and patient life.

Moreover, there are many things in human life of such a kind, that it is better for the knowledge of them to be deferred for a certain time. Hence, it is requisite that a boy should be so tutored, as not to seek after venereal pleasures before he is' twenty years of age, and then should rarely engage in them. This, however, will take place, if he conceives that a good habit of body, and continence, are beautiful and honourable.

It is likewise requisite that such legal institutes as the following should be taught in Grecian cities, viz. that connection with a mother, or a daughter, or a sister, should not be permitted either in temples, or in a public place; for it is beautiful and advantageous that numerous impediments to this energy should be employed.

And universally, it is requisite that all preternatural generations should be prevented, and those which are attended with wanton insolence. But such as are conformable to nature should be admitted, and which are effected with temperance, for the purpose of producing a temperate and legitimate offspring.

Again, it is necessary that those who intend to beget children, should providentially attend to the welfare of their future offspring. A temperate and salutary diet, therefore, is the first and greatest thing which should be attended to by him who wishes to beget children; so that he should neither be filled with unseasonable food, nor become intoxicated, nor subject himself to any other perturbation, from which the habits of the body may become worse. But, above all things, it is requisite to be careful that the mind, in the act of copulation, should be in a tranquil state: for, from depraved, discordant, and turbulent habits, bad seed is produced.

It is requisite, therefore, to endeavour, with all possible earnestness and attention, that children may be born elegant and graceful, and that when born, they should be well educated. For neither is it just that those who rear horses, or birds, or dogs, should, with the utmost diligence, endeavour that the breed may be such as is proper, and from such things as are proper, and when it is proper; and likewise consider how they ought to be disposed when they copulate with each other, in order that the offspring may not be a casual production; —but that men should pay no attention to their progeny, but should beget them casually; and when begotten, should neglect both their nutriment and their education: for these being disregarded, the causes of all vice and depravity are produced, since those that are thus born will resemble cattle, and will be ignoble and vile.

On Laws — A Fragment Preserved by Stobæus

Life, connectedly contains in itself bodies; but of this, soul is the cause. Harmony comprehends, connectedly, the world; but of this, God is the cause. Concord binds together families and cities; and of this, law is the cause. Hence, there is a certain cause and nature which perpetually adapts the parts of the world to each other, and never suffers them to be disorderly and without connection. Cities, however, and families, continue only for a short time; the progeny of which, and the mortal nature of the matter of which they consist, contain in themselves the cause of dissolution; for they derive their subsistence from a mutable and perpetually passive nature. For the destruction of things which are generated, is the salvation of the matter from which they are generated. That nature, however, which is perpetually moved governs, but that which is always passive is governed; and the one is in capacity prior, but the other posterior. The one also is divine, and possesses reason and intellect, but the other is generated, and is irrational and mutable.