

Dante Alighieri - opera omnia - a question of the water and of the land - translate english - letteratura italiana

alighieri text integral passage complete quotation of the sources comedies works historical literary works in prose and in verses

Translated by Philip Wicksteed

DE FORMA ET SITU DUORUM ELEMENTORUM
AQUE VIDELICET ET TERRE

To all and singular who shall inspect these presents, Dante Alighieri of Florence, least amongst true students of philosophy, giveth greeting, in Him who is the beginning of truth and the light.

I

Be it known to you all that when I was in Mantua a certain discussion arose, which, following the appearance rather than truth, received manifold expansion, but remained undecided. Wherefore since I have been nurtured from my boyhood in the love of truth, I could not endure to abstain from discussing the aforesaid question, but determined to demonstrate the truth about it, and further to refute the arguments urged on the other side, in equal love of truth and hatred of falsehood. And lest the spleen of the many who are wont to foist lies, in their absence, upon those they hate, should pervert, behind my back, what I had rightly uttered, it was my further pleasure, in this attestation prepared by my own fingers, to leave a record of my conclusion, and to design with my pen the form of this whole disputation.

II

The question, then, turned on the position and shape, or form, of two elements, *water*, to wit, and *earth*; and what I here mean by form is what the Philosopher puts down as the fourth kind of 'quality' in the *Predicaments*. And the discussion was limited to this inquiry (as the principle of the truth to be investigated) 'Whether water, in its own sphere, that is in its natural circumference, was in any part higher than the earth which emerges from the waters, and which we commonly call the habitable quarter.' And it was argued on the affirmative, for many reasons; some of which reasons were so insignificant that I passed them by, but five I retained as having some apparent validity.

III

The first argument ran thus: Two circumferences, which are not uniformly distant from each other, cannot have a common centre. The circumference of water and the circumference of earth are not uniformly distant. Therefore, etc. Then it went on: Since the centre of earth, as all admit, is the centre of the universe; and anything that has a position in the world other than it, is higher than it; we must conclude that the circumference of water is higher than the circumference of earth, since the circumference corresponds to the centre all round. The major premise of the chief syllogism appeared to be manifest from the theories demonstrated in geometry, the minor by the evidence of the senses, because we see that in some places the circumference of earth is included in the circumference of water and in some places excluded.

IV

Second argument: To the nobler body the nobler place is due. Water is a nobler body than earth, therefore the nobler place is due to water. And since place is nobler in proportion as it is higher, because it is nearer to the most noble envelope, which is the first heaven; therefore, etc. It remains that the place of water is loftier than the place of earth, and secondly that water is loftier than earth, since the position of the place and of the thing placed is identical. The major and minor of the chief syllogism of this argument were taken as obvious.

V

The third argument was this: Every belief that contradicts the senses is a false belief. The belief that water is not loftier than earth contradicts the senses. Therefore it is a false belief. The first premise was said to appear from the Commentator on the third *De Anima*; the second or minor from the experience of sailors, who, when at sea, observe the mountains beneath them; which they prove by saying that when they climb the mast they see them, but not when on the deck; and this they think is due to the land being far beneath them and depressed below the ridge of the sea.

VI

Fourthly, it was argued thus: If earth were not lower than water, the earth would be entirely waterless, at any rate in the exposed portion about which we are inquiring; and so there would be no springs, nor rivers, nor lakes; the opposite of which we see. Wherefore the opposite of that from which this follows is true, namely, that water is higher than earth. The sequence is proved by the fact that water is naturally borne downwards; and since the sea is the prime source of all waters (as is shown by the Philosopher in his *Meteorics*), if the sea were not loftier than the land no water would move to the land, since in every natural movement of water the source must needs be the loftier.

VII

It was also argued fifthly: Water seems mainly to follow the motion of the moon, as appears by the flow and ebb of the sea. Since, then, the orbit of the moon is excentric, it seems reasonable that water in its sphere should imitate the excentricity of the orbit of the moon, and so be itself excentric; and since this could not be without its being higher than the land, as was shown in the first argument, the same conclusion follows as before.

VIII

By these arguments, therefore, and others to which we need pay no heed, they who hold that water is loftier than the exposed or habitable earth endeavour to

show that their opinion is true, though sense and reason contradict it. For by sense we perceive that throughout the whole earth rivers flow down to the sea, whether northern or southern, eastern or western; which would not be unless the sources of the rivers and the course of their channels were higher than the surface of the sea. Reason will be shown below to be on the same side.

IX

This will be demonstrated by many arguments in expounding or determining the position and form of the two elements, as was hinted above. This will be the order. First, the impossibility of the water at any part of its circumference being loftier than this emergent or uncovered land will be demonstrated. Secondly, it will be shown that the emergent land is everywhere loftier than the whole surface of the sea. Thirdly, a rejoinder will be urged against the conclusions established, and this rejoinder will be refuted. Fourthly, the final and efficient causes of this elevation or emergence of land will be shown. Fifthly, the arguments above noted will be answered.

X

As to the first point, then, I say that if water, considered at the circumference, were at any point higher than the land, it would necessarily be in one of these two ways: either by water being excentric, as the first and fifth arguments maintained, or by its not being excentric indeed, but having a hump in some place, wherein it should rise above the earth. No otherwise could it be, as is sufficiently manifest on close consideration. But neither of these cases is possible; therefore neither is that [possible] from which one or the other of the two necessarily followed. The sequence, as laid down, is manifest from the *locus* on the adequate division of cause. The impossibility of the consequent will appear by what we are about to prove.

XI

To prove what we have to say, two points must be conceded: the first is that water naturally moves downward, and the second that water is naturally a fluid body and incapable of being bounded by a boundary intrinsic to itself. And if any

one were to deny these two principles, or either of them, our proof would not appeal to him, since, if any one denies the principles of any science, there can be no discussion with him in that science, as is shown in the first *Physicorum*. For these principles are discovered by the senses and by induction, whose province it is to discover such, as is clear from the first ad *Nichomachum*.

XII

For the refutation of the first member of the consequent, I say that it is impossible for water to be excentric; which I demonstrate thus: Were water excentric, three impossibilities would follow, the first of which is, that water would naturally move both up and down; the second is, that water would not drop along the same line as earth; the third is, that gravity would be predicated in a different sense of each of them. All which seem to be not only false but impossible. The sequence is thus established. Let the circumference marked with three crosses be heaven, that marked with two crosses water, and that marked with one, earth. And let the centre of heaven and earth be the point marked A, and the centre of water, which is excentric, the point marked B, as shown in the marked figure. I say, then, that if there should be water at A having a free course, it would naturally move to B, since everything that has weight naturally moves to the centre of its proper circumference; and since moving from A to B is moving up (since A is absolutely down, with reference to everything), water will naturally move up, which was the first impossibility mentioned above. Again, let there be a clod of earth at Z, and let there be a quantity of water at the same place, and let there be no obstacle. Then, since everything that has weight moves, as already declared, to the centre of its proper circumference, the earth will move along the straight line to A, and the water along the straight line to B; but this will of necessity be along different lines, as is clear from the marked figure; and not only is this impossible, but Aristotle would laugh to hear it; and this is the second point which had to be shown. The third I thus set forth: Heavy and light are affections of elementary bodies, which move in straight lines; and the light ones move up, but the heavy down. For what I mean by heavy and light is mobile, as the Philosopher in *Caelo et Mundo* has it. If, then; the water move to B and the earth to A, then, since they are both heavy bodies, they will move to different 'downs,' the meanings of which cannot be the same, since one is 'down' absolutely and the other relatively. And since difference of meaning in the ends argues difference in the things which conduce to them, it is manifest that the meaning of fluidity will be different in the case of water and of earth; and since difference of meaning with identity of name constitutes equivocality, as is

clear from the Philosopher in *Antepredicamentis*, it follows that gravity would be predicated in different senses of water and of earth, which was the third member of the sequence that we were to develop. Wherefore it follows, from the true demonstration (derived from the character of the bodies concerned) whereby I have shown that this is not so, that water is not excentric; and this was the first [member] which we had to refute of the consequent of the main sequence.

XIII

To refute the second member of the consequent of the main sequence, I say that it is also impossible for water to have a hump, which I thus demonstrate: Let heaven be the circumference marked with four crosses, water that to marked with three, and earth that marked with two; and let the centre of earth, of water (supposed concentric), and of heaven be D. And let us suppose it to be known that water cannot be concentric with earth unless earth have a hump somewhere, above its central circumference (as is clear to those who have studied mathematics), if indeed it emerges anywhere at all from the circumference of the water. So let the hump of water be at the place marked H, and the hump of the earth at the place marked G; then let a line be drawn from D to H, and another from D to F. It is clear that the line from D to H is longer than the line from D to F; and therefore its extremity is higher up than the extremity of the other; and since each touches the surface of the water at its extremity, but does not pass it, it is clear that the water of the hump will be 'up' with respect to the surface at which F is. Since, then, there is no obstacle, it follows from our axioms that the water of the hump will flow down until it is equidistant from D with the regular or central circumference; and thus it will be impossible for the hump to remain, or indeed to exist; which is what we were to show. And besides this most cogent demonstration, it can also be shown by way of probability that water would not have a hump protruding from its regular circumference; for what can be done by one, is better done by one than by several; and the whole matter before us may be effected by a hump of earth alone, as will be seen below. Therefore there is no hump in the water, since God and nature ever doeth and willeth what is better, as is clear from the Philosopher, *De Caelo et Mundo*, and in the second *De Generatione Animalium*. Thus we have sufficiently established the first point, namely, that it is impossible for water in any portion of its circumference to be loftier, that is remoter from the centre of the universe, than is the surface of this habitable earth, which was the first in order of the things we had to say.

XIV

If, then, it is impossible for water to be excentric, as was shown by the first figure, and also that it should have a hump, as is shown by the second, it must necessarily be concentric [with earth], and also symmetrical, that is equally distant from the centre of the universe at every point of its circumference, as is obvious.

XV

I now proceed to argue thus: Anything that is higher than any part of a circumference equidistant from its centre is remoter from that centre than any part of that circumference. But all the shores, both of Amphitrite herself and of the inland seas, are higher than the surface of the contiguous sea, as is plain to the eye; therefore all the shores are remoter from the centre of the universe, since the centre of the universe is also the centre of the sea, as we have seen; and the surfaces at the shores are parts of the total surface of the sea. And since everything remoter from the universe is loftier, it follows that all the shores are higher than all the sea; and if the shores, then much more the other regions of earth, since the shores are the lower portions of the land, as the rivers show by descending to them. Now the major premise of this demonstration is demonstrated in geometrical theorems; and the demonstration is conclusive, although it derives its force (as in the case of our own proofs above) from a *reductio ad impossibile*. And so we have established the second point.

XVI

But against the things now established it is argued thus: The heaviest body seeks the centre equally from every direction and with the greatest force. Earth is the heaviest body. Therefore it seeks the centre equally from every direction and with the greatest force. And from this conclusion follows, as I shall show, that the earth is equally distant from the centre at every point of its circumference (as is involved in the meaning of the word 'equally'), and that it is lower down than any other body (as is involved in the meaning of 'with the greatest force'); whence it would follow (if water were concentric, as declared) that the land would be submerged on every side, and would not appear; the

contrary of which we see. That these results follow from the conclusion I thus explain: Let us make an assumption contrary, or opposite, to this consequence (namely, that it is equidistant at every part), and let us say it is not equidistant. And let us suppose that at one point the surface of the earth is distant twenty stadia, and at another point ten, so that one of its hemispheres will exceed the other in quantity. Nor does it matter whether the difference in distance be little or much, so long as there is a difference. Since, then, there is more virtue of gravity in the greater quantity of earth, the greater hemisphere, by the superior virtue of its weight, will shove the lesser hemisphere until the quantity of each is equalised, by which equalising their weight will be equalised also; and thus the distance on either side will be reduced to fifteen stadia, as we see when we add weights to the balances to bring them to equality. Whereby it is plainly impossible for earth, which equally seeks the centre, to be diversely or unequally distant from it in its circumference. Therefore the opposite of being unequally distant, namely, being equally distant, is necessary where there is any distance at all; and thus the sequence has been defended so far as refers to equidistance. That it also follows that it must be below all other bodies (which was likewise declared to follow from our conclusion), I thus maintain: The most potent virtue most potently attains the goal; for what makes it most potent is, that it can most swiftly and easily reach the goal. The most potent virtue of gravity is in the body which most potently seeks the centre; and that body is earth. Therefore earth most potently approaches the goal of gravity, which is the centre of the world. Therefore it will be below all the other bodies, seeing that it seeks the centre most potently; which was the second point to be elaborated.

XVII

But this argument does not appear to be conclusive, because the major of the main syllogism does not itself appear to be necessarily true. For it was urged, 'that the heaviest body seeks the centre equally from every direction, and most potently,' which does not seem to be necessary; for though earth is the heaviest body compared to other bodies, yet compared to itself, to wit in its several parts, it may be both the heaviest and not the heaviest; for there may be heavier earth on the one side than on the other. For, since the equalising of a heavy body is not effected by its quantity, as quantity, but by its weight, there might be an equalising of weight where there was no equalising of quantity; and so the demonstration is apparent and not real.

XVIII

But this rejoinder is futile, since it proceeds from ignorance of the nature of homogeneous and rejected elementary bodies; for elementary bodies, too, are homogeneous. Homogeneous ones, such as refined gold, and elementary bodies, such as fire and earth, are uniformly qualified in all their parts, by any affection natural to them. Wherefore, since earth is an elementary body, it is uniformly qualified in its parts by nature and, so to speak, of itself. Wherefore, since gravity is naturally inherent in earth, and earth is an elementary body, it must of necessity possess gravity uniformly, in all its parts, in proportion to its quantity; and thus the validity of the initial rejoinder fails. Whence we must answer that the nature of the rejoinder is sophistical, for it fails to distinguish rightly between 'relative' and 'absolute.' And therefore be it known that universal nature is not baulked of her goal. And so, though particular nature may be baulked of her intended goal by the recalcitrance of matter, yet universal nature can in no sort fail of her intention, since both the actuality and the potentiality of things which may be or not be, are equally subject to universal nature. But it is the intention of universal nature that all the forms which are within the potentiality of first matter should be reduced to actuality, and should be actualised in specific fashion, in order that first matter, in its totality, should be submitted to every material form, although in each of its parts it should be submitted to every opposite privation save one. For since all forms which are ideally within the potentiality of matter, are actualised in the mover of heaven, as the Commentator says in the *De Substantia Orbis*, if all these forms were not continuously actualised, the mover of heaven would fail of the complete diffusion of his excellence, which may not be uttered. And since all material forms of things that can come into and pass out of existence, except the forms of the elements, require a mingled and compound material and substrate, whereto, as to their end, the elements, as elements, are ordained, and there can be no mixture except where the things to be mixed can come together, as is obvious, it is necessary that there should be some place in the universe where all the things capable of being mixed, to wit, elements may have leave to come together. But this might not be unless earth at some point emerged, as is plain on reflection. Whence, since every [special] nature obeys the intention of universal nature, it was necessary that over and above the simple nature of earth, which is to be below, it should have another nature whereby to obey the intention of universal nature; namely, that it should be susceptible of being elevated in part by the virtue of heaven, as the obeying by the commanding; just as we see in the case of the appetitive and resenting nature in man, which, although their proper impulse urges them to obey the affections of sense, yet in so far as they are susceptible of obedience to reason, are sometimes restrained from their proper

impulse, as appears from the first of the *Ethics*.

XIX

Therefore though earth according to its simple nature seeks the centre equally, as was said in discussing the rejoinder, yet according to a certain nature it is susceptible of being partially elevated, in obedience to universal nature, that the mingling may be possible. And thus the concentricity of earth and water is preserved, and no impossible consequence follows, if we philosophise rightly, as is clear from this figure. Let the circle marked A be heaven; the circle marked B, water; the circle marked C, earth; nor does it matter to the truth propounded whether water appears to outdistance earth little or much. And you are to know that this figure is the true one, for it is such as the form and position of the two elements really are. The other two figures above are false, and were inserted not because it is so, but to make the learner perceive, as saith he in the first *Priorum*. And that the earth emerges in a hump and not by its central circumference is clear when we consider the shape of the emerging land; for the figure of the emergent land is the figure of a half-moon, which could not possibly be the case if it emerged in accordance with its regular or central circumference; for as is demonstrated in mathematical theorems, the regular surface of a sphere must always necessarily emerge from a plane or spherical surface (as the surface of water must be) with a circular horizon. And that the emergent land has a shape like that of a half-moon is clear, both from the natural philosophers who treat of it, and astronomers who describe the zones, and cosmographers who set forth the regions of the earth in all quarters. For, as is held by all these in common, this habitable part stretches longitudinally from Gades, established by Hercules on the western boundary, to the mouths of the river Ganges, as Orosius writes. And this longitude is so great that when, at equinox, the sun is setting to those who are at one extremity, he is rising to those who are at the other, as astronomers have discovered by eclipse of the moon; so the extremities of the said longitude must be a hundred and eighty degrees distant, which is half the distance of the whole circumference. Latitudinally, as we commonly receive from the same authorities, it stretches from those whose zenith is the equinoctial circle to those whose zenith is the circle described by the pole of the zodiac round the pole of the universe, which is distant from the pole of the universe about twenty-three degrees. And thus the extension in latitude is about sixty-seven degrees and no more, as is evident on reflection. And thus it is clear that the emergent land must have the figure of a half-moon, or something like it; for that is the figure which results from such latitude and longitude, as is

evident. But if it had a circular horizon it would have a convex circular figure, and so the longitude and latitude would not differ in the distance of their extremities, as may be seen by very women. And so the third point in the order of what we had to discuss is elucidated.

XX

It now remains to consider the final and the efficient cause of this elevation of the land, which has been sufficiently demonstrated. And this is the proper order of art, for the question whether a thing is, should precede the question why it is. As to the final cause, what has been said under the last heading but one may suffice. But for the investigation of the efficient cause we must note in advance that the present treatise does not go beyond the scope of nature, for it is confined to mobile existence, to wit water and earth, which are natural bodies; and therefore we are to look for such certainty as is consonant with natural order, which is here our subject-matter; for concerning every kind of thing we are to seek the degree of certainty of which the nature of the thing is capable, as is clear from the first *Ethicorum*. Since, then, it is our inborn method of investigating the truth as to nature to proceed from what is better known to us but less known to nature, to what is more certain and better known to nature, as is clear from the first *Physicorum*, and in such matters effects are better known to us than causes, for it is by them that we are led to the knowledge of causes, as is manifest (for it was the eclipse of the sun that led to the recognition of the interposition of the moon; so that men began to philosophise because of their wonder), the path of investigation in the things of nature must needs be from effects to causes; and this method, though it may yield adequate certainty, yet cannot yield such certainty as the way of investigation in mathematics, which is from causes, or the higher, to effects, or the lower. And so we are to look for such certainty as may be had in this style of demonstration. I say, then, that the efficient cause of this elevation cannot be earth herself; for, since being elevated is a kind of impulse upward, and an impulse upward is contrary to the nature of earth, and nothing can, in itself, be the cause of what is contrary to its own nature, it remains that earth cannot be the efficient cause of this elevation. And likewise neither can it be water; for since water is a homogeneous body, its virtue must, in itself, be uniformly distributed in all its parts; and so there would be no reason why it should raise it here any more than elsewhere. This same argument rules out air and fire from this causation. And since there is nothing left save heaven; this effect must be referred to it, as to its proper cause. But since there are sundry heavens it remains to inquire to which of them it must be

referred as to its proper cause. Not to the heaven of the moon; for, since the organ of its power or influence is the moon herself, and since she departs as far from the equinoctial towards the antarctic pole as towards the arctic, she would elevate it as much on the other side as on this side of the equinoctial, which does not take place. Nor will it do to say that this declination could not take place because of her greater approximation to the earth, due to excentricity; because if the moon had this power of elevation at all (since agents operate with greater power the nearer they are), she would have raised it more there than here.

XXI

This same line of reasoning rules out all the planetary orbs from such causation, and since the *primum mobile*, or ninth sphere, is uniform throughout, and therefore uniformly endowed with virtue throughout, there is no reason why it should lift the earth more from this side than from that. Since, then, there are no other moving bodies except the starry heaven, which is the eighth sphere, this effect must necessarily be referred to it. And to make this evident, be it known that although the starry heaven has unity in substance, yet it has multiplicity in virtue; and that is why it needed the diversity in its parts which we observe, in order, by diverse organs, to pour down its diverse virtues; and let him who perceives not these things know that he is outside the threshold of philosophy. We observe in this heaven difference in the magnitude and luminosity of the stars and in the figures and forms of the constellations, which differences cannot be for nought, as must be perfectly clear to all who have been nurtured in philosophy. Wherefore the virtues of this star and that differ, and likewise of this constellation and of that. And the virtue of the stars this side of the equinoctial differs from that of those beyond it. Wherefore, since the aspects of things below are like to the aspects of things above, as Ptolemy asserts, it follows that (since that effect can only be referred to the starry heaven, as we have seen) the similitude of the virtual agent abides in that region of heaven which covers this exposed land. And since the exposed land stretches from the equinoctial line to the line which the pole of the zodiac describes round the pole of the universe, as was said above, it is manifest that the lifting virtue is in those stars which are in the region of heaven contained between those two circles, whether it elevates it by way of attraction, as the magnet attracts iron, or by way of impulsion, by generating vapours that force it up, as in the case of special mountain ranges. But now the question arises: Since that region of heaven is borne round us in a circle, why was not the corresponding elevation circular? I answer that it was not circular, because there was not sufficient matter for so great an elevation. Then

the argument is pushed further, and it is asked: why was the hemispherical elevation rather on this side than the other? To this we must answer according to what the Philosopher says in the Second *De Caelo*, when he asks why the heavens move from east to west, and not the other way. For there he says that such questions arise from great folly or from great presumption, because they transcend our intellect. And therefore we must reply to this question that the great disposer, the glorious God, who made his dispositions concerning the position of the poles, the position of the centre of the universe, the distance of the extreme circumference of the universe from its centre, and other like things, ordained these, even as those, as was best. Wherefore when he said, 'Let the waters be gathered together into one place and let the dry land appear,' the heaven was at the same time endowed with virtue to act and the earth with potentiality to be acted on.

XXII

Let men desist therefore, let them desist, from searching out things that are above them, and let them seek up to such point as they may, that they may draw themselves to immortal and divine things to their utmost power, and may abandon things too great for them. Let them listen to the friend of Job, when he says: 'Wilt thou understand the footprints of God, and search out the Almighty to perfection?' Let them listen to the Psalmist, when he says: 'Thy knowledge is wonderful, and has comforted me, and I may not attain to it.' Let them listen to Isaiah, when he says: 'As far as the heavens are above the earth, so far are my ways above your ways'; for he was speaking in the person of God to man. Let them hearken to the voice of the apostle *Ad Romanos*: 'Oh the height of the wealth, of the knowledge, and wisdom of God! how incomprehensible are his judgments and his ways are past finding out.' And finally let them hearken to the proper voice of the Creator, when he says: 'Whither I go, ye cannot come.' And let this suffice for the inquiry into the truth we set before us.

XXIII

And when we have seen this it is easy to refute the arguments which were urged above on the other side, which was the fifth thing set before us to do. When it was said therefore, 'Two circumferences unequally distant from each other, cannot have a common centre,' I say that this is true, if the circumferences are regular, and without a hump or humps. And when it is said, in the minor, that the

circumferences of water and of earth are such, I say that it is not true unless we allow, for the hump on the earth; and so the argument does not run. As to the second, when it is said: 'The nobler place is due to the nobler body,' I say that it is true as far as concerns their proper nature; and I grant the minor; but when the conclusion is drawn, that water should therefore be in a more exalted position, I say that it is true so far as the proper nature of each body is concerned, but by reason of a more eminent cause, as said above, it happens that in this part the earth is higher; and thus the argument was defective in the first proposition. As to the third, when it said: 'Any idea which contradicts the senses is a false idea,' I say that the argument proceeds upon a fallacious imagination. For the sailors suppose that the reason why they cannot see the land when they are on deck is that the sea is higher than the land; but it is not so; nay, the contrary result would follow, for they would see more. But it happens because the direct ray from the visible thing is intercepted, between the thing and the eye, by the convexity of the water. For since the water must needs have a spherical form in every direction around its centre, it must necessarily, at any considerable distance, interpose the obstacle of a certain convexity. As to the fourth, when it was argued: 'If the earth were not lower', and the rest, I say that the argument is founded upon falsity, and is therefore nought. For the vulgar, and such as have no knowledge of physical arguments, believe that water rises to the summits of the mountains and also to the place of springs, in the form of water; but that is quite puerile, for waters are generated there (as the Philosopher shows in his *Meteorics*) by matter which ascends in the form of vapour. As to the fifth, when it is said that water is a body that imitates the orbit of the moon, and therefrom the conclusion is drawn that it must needs be excentric, since the orbit of the moon is excentric, I say that that argument carries no necessity; for though one thing should imitate another in one respect, it is not therefore necessary that it should imitate it in every respect. We see that fire imitates the circulation of the heavens, and yet it does not imitate it in not moving in a straight line, or in not having any contrary to its quality; and so the argument does not run. So much, then, for the arguments. Thus, then, the determination and treatment is brought to a conclusion concerning the form and position of the two elements, as above proposed.

XXIV

This philosophic question was determined under the rule of the unconquered lord, Lord Can Grande della Scala, representing the sacred Roman empire, by me, Dante Aligheri, least of philosophers, in the illustrious city of Verona, in the

sanctuary of the glorious Helen, in the presence of all the clergy of Verona, except certain who, burning with excess of charity, will not accept the invitations of others; and who, in the virtue of humility, poor pensioners of the Holy Spirit, lest they should seem to endorse the excellence of others, refuse to be present at their discourses. And this was accomplished in the one thousand three hundred and twentieth year, from the nativity of our Lord Jesus Christ, on Sunday, which our aforesaid Saviour made venerable to us by his glorious nativity and by his wondrous resurrection, which day was the seventh from the Ides of January, and the fourteenth before the Kalends of February.