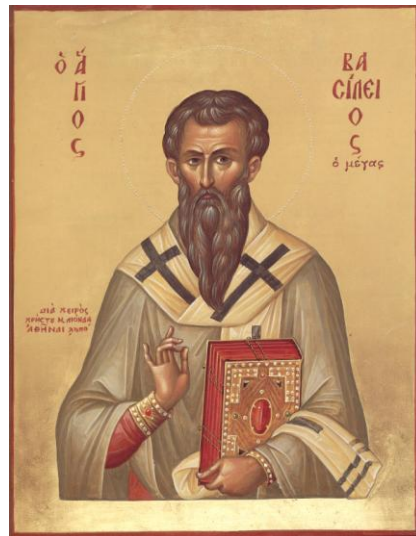


## HOMILIES AT HEXAEMERON

(fragments from the book Homilies at Hexaemeron by St. Basil the Great)

Ro version: <http://www.hexaemeron.ro/Hexaemeron/SfVasile.html>



### ***In the Beginning God made the Heaven and the Earth***

By naming the two extremes, he suggests the substance of the whole world, according to heaven the privilege of seniority, and putting earth in the second rank. All intermediate beings were created at the same time as the extremities. Thus, although there is no mention of the elements, fire, water and air, imagine that they were all compounded together, and you will find water, air and fire, in the earth. For fire leaps out from stones; iron which is dug from the earth produces under friction fire in plentiful measure. A marvellous fact! Fire shut up in bodies lurks there hidden without harming them, but no sooner is it released than it consumes that which has hitherto preserved it. The earth contains water, as diggers of wells teach us. It contains air too, as is shown by the vapours that it exhales under the sun's warmth when it is damp. Now, as according to their nature, heaven occupies the higher and earth the lower position in space, (one sees, in fact, that all which is light ascends towards heaven, and heavy substances fall to the ground); as therefore height and depth are the points the most opposed to each other it is enough to mention the most distant parts to signify the inclusion of all which fills up intervening Space. Do not ask, then, for an enumeration of all the elements; guess, from what Holy Scripture indicates, all that is passed over in silence.

If we were to wish to discover the essence of each of the beings which are offered for our contemplation, or come under our senses, we should be drawn away into long digressions, and the solution of the problem would require more words than I possess, to examine fully the matter. To spend time on such points would not prove to be to the edification of the Church. Upon the essence of the heavens we are contented with what Isaiah says, for, in simple language, he gives us sufficient idea of their nature, "The heaven was made like smoke," that is to say, He created a subtle substance, without solidity or density, from which to form the heavens. As to the form of them we also content ourselves with the language of the same prophet, when praising God "that stretcheth out the heavens as a curtain and spreadeth them out as a tent to dwell in." In the same way, as concerns the earth, let us resolve not to torment ourselves by trying to find out its essence, not to tire our reason by seeking for the substance which it conceals. Do not let us seek for any nature devoid of qualities by the conditions of its existence, but let us know that all the phenomena with which we see it clothed regard the conditions of its existence and complete its essence. Try to take away by reason each of the qualities it possesses, and you will arrive at nothing. Take away black, cold, weight, density, the qualities which concern taste, in one word all these which we see in it, and the substance vanishes. If I ask you to leave these vain questions, I will not expect you to try and find out the earth's point of support. The mind would reel on beholding its reasonings losing themselves without end. Do you say that the earth reposes on a bed of air? How, then, can this soft substance, without consistency, resist the enormous weight which presses upon it? How is it

that it does not slip away in all directions, to avoid the sinking weight, and to spread itself over the mass which overwhelms it? Do you suppose that water is the foundation of the earth? You will then always have to ask yourself how it is that so heavy and opaque a body does not pass through the water; how a mass of such a weight is held up by a nature weaker than itself. Then you must seek a base for the waters, and you will be in much difficulty to say upon what the water itself rests.

Do you suppose that a heavier body prevents the earth from falling into the abyss? Then you must consider that this support needs itself a support to prevent it from falling. Can we imagine one? Our reason again demands yet another support, and thus we shall fall into the infinite, always imagining a base for the base which we have already found. And the further we advance in this reasoning the greater force we are obliged to give to this base, so that it may be able to support all the mass weighing upon it. Put then a limit to your thought, so that your curiosity in investigating the incomprehensible may not incur the reproaches of Job, and you be not asked by him, "Whereupon are the foundations thereof fastened?" If ever you hear in the Psalms, "I bear up the pillars of it;" see in these pillars the power which sustains it. Because what means this other passage, "He hath founded it upon the sea," if not that the water is spread all around the earth? How then can water, the fluid element which flows down every declivity, remain suspended without ever flowing? You do not reflect that the idea of the earth suspended by itself throws your reason into a like but even greater difficulty, since from its nature it is heavier. But let us admit that the earth rests upon itself, or let us say that it rides the waters, we must still remain faithful to thought of true religion and recognise that all is sustained by the Creator's power. Let us then reply to ourselves, and let us reply to those who ask us upon what support this enormous mass rests, "In His hands are the ends of the earth." It is a doctrine as infallible for our own information as profitable for our hearers.

There are inquirers into nature ([Aristotle](#)) who with a great display of words give reasons for **the immobility of the earth**. Placed, they say, in the middle of the universe and not being able to incline more to one side than the other because its centre is everywhere the same distance from the surface, it necessarily rests upon itself; since a weight which is everywhere equal cannot lean to either side. It is not, they go on, without reason or by chance that the earth occupies the centre of the universe. It is its natural and necessary position. As the celestial body occupies the higher extremity of space all heavy bodies, they argue, that we may suppose to have fallen from these high regions, will be carried from all directions to the centre, and the point towards which the parts are tending will evidently be the one to which the whole mass will be thrust together. If stones, wood, all terrestrial bodies, fall from above downwards, this must be the proper and natural place of the whole earth. If, on the contrary, a light body is separated from the centre, it is evident that it will ascend towards the higher regions. Thus heavy bodies move from the top to the bottom, and following this reasoning, the bottom is none other than the centre of the world. Do not then be surprised that the world never falls: it occupies the centre of the universe, its natural place. By necessity it is obliged to remain in its place, unless a movement contrary to nature should displace it. If there is anything in this system which might appear probable to you, keep your admiration for the source of such perfect order, for the wisdom of God. Grand phenomena do not strike us the less when we have discovered something of their wonderful mechanism. Is it otherwise here? At all events let us prefer the simplicity of faith to the demonstrations of reason.

We might say the same thing of the heavens. With what a noise of words the sages of this world have discussed their nature! Some have said that heaven is composed of four elements as being tangible and visible, and is made up of earth on account of its power of resistance, with fire because it is striking to the eye, with air and water on account of the mixture. Others have rejected this system as improbable, and introduced into the world, to form the heavens, a fifth element after their own fashioning. There exists, they say, an aethereal body which is neither fire, air, earth, nor water, nor in one word any simple body. These simple bodies have their own natural motion in a straight line, light bodies upwards and heavy bodies downwards; now this motion upwards and downwards is not the same as circular motion; there is the greatest possible difference between straight and circular motion. It therefore follows that bodies whose motion is so various must vary also in their essence. But, it is not even possible to suppose that the heavens should be formed of primitive bodies which we call elements, because the reunion of contrary forces could not produce an even and spontaneous motion, when each of the simple bodies is receiving a different impulse

from nature. Thus it is a labour to maintain composite bodies in continual movement, because it is impossible to put even a single one of their movements in accord and harmony with all those that are in discord; since what is proper to the light particle, is in warfare with that of a heavier one. If we attempt to rise we are stopped by the weight of the terrestrial element; if we throw ourselves down we violate the igneous part of our being in dragging it down contrary to its nature. Now this struggle of the elements effects their dissolution. A body to which violence is done and which is placed in opposition to nature, after a short but energetic resistance, is soon dissolved into as many parts as it had elements, each of the constituent parts returning to its natural place. It is the force of these reasons, say the inventors of the fifth kind of body for the genesis of heaven and the stars, which constrained them to reject the system of their predecessors and to have recourse to their own hypothesis. But yet another fine speaker arises and disperses and destroys this theory to give predominance to an idea of his own invention. Do not let us undertake to follow them for fear of falling into like frivolities; let them refute each other, and, without disquieting ourselves about essence, let us say with Moses "God created the heavens and the earth." Let us glorify the supreme Artificer for all that was wisely and skillfully made; by the beauty of visible things let us raise ourselves to Him who is above all beauty; by the grandeur of bodies, sensible and limited in their nature, let us conceive of the infinite Being whose immensity and omnipotence surpass all the efforts of the imagination. Because, although we ignore the nature of created things, the objects which on all sides attract our notice are so marvellous, that the most penetrating mind cannot attain to the knowledge of the least of the phenomena of the world, either to give a suitable explanation of it or to render due praise to the Creator, to Whom belong all glory, all honour and all power world without end. Amen.

The orders of angels, the heavenly hosts, all intellectual natures named or unnamed, all the ministering spirits, did not live in darkness, but enjoyed a condition fitted for them in light and spiritual joy. No one will contradict this; least of all he who looks for celestial light as one of the rewards promised to virtue, the light which, as Solomon says, is always a light to the righteous, the light which made the Apostle say "Giving thanks unto the Father, which hath made us meet to be partakers of the inheritance of the saints in light." Finally, if the condemned are sent into outer darkness evidently those who are made worthy of God's approval, are at rest in heavenly light. When then, according to the order of God, the heaven appeared, enveloping all that its circumference included, a vast and unbroken body separating outer things from those which it enclosed, it necessarily kept the space inside in darkness for want of communication with the outer light. Three things are, indeed, needed to form a shadow, light, a body, a dark place. The shadow of heaven forms the darkness of the world.

***And God said, Let there be light.***

The first word of God created the nature of light; it made darkness vanish, dispelled gloom, illuminated the world, and gave to all beings at the same time a sweet and gracious aspect. The heavens, until then enveloped in darkness, appeared with that beauty which they still present to our eyes. The air was lighted up, or rather made the light circulate mixed with its substance, and, distributing its splendour rapidly in every direction, so dispersed itself to its extreme limits. Up it sprang to the very aether and heaven. In an instant it lighted up the whole extent of the world, the North and the South, the East and the West. For the aether also is such a subtle substance and so transparent that it needs not the space of a moment for light to pass through it. Just as it carries our sight instantaneously to the object of vision, so without the least interval, with a rapidity that thought cannot conceive, it receives these rays of light in its uttermost limits. With light the aether becomes more pleasing and the waters more limpid. These last, not content with receiving its splendour, return it by the reflection of light and in all directions send forth quivering flashes. The divine word gives every object a more cheerful and a more attractive appearance, just as when men in deep sea pour in oil they make the place about them clear. So, with a single word and in one instant, the Creator of all things gave the boon of light to the world.

"Let there be light". The order was itself an operation, and a state of things was brought into being, than which man's mind cannot even imagine a pleasanter one for our enjoyment. It must be well understood that when we speak of the voice, of the word, of the command of God, this divine language does not mean to us a sound which escapes from the organs of speech, a collision of air struck by the tongue; it is a simple sign of the will of God, and, if we give it the form of an order, it is

only the better to impress the souls whom we instruct. "And God saw the light, that it was good."

***And God called the light Day and the darkness he called Night.***

Since the birth of the sun, the light that it diffuses in the air, when shining on our hemisphere, is day; and the shadow produced by its disappearance is night. But at that time it was not after the movement of the sun, but following this primitive light spread abroad in the air or withdrawn in a measure determined by God, that day came and was followed by night. "And the evening and the morning were the first day." Evening is then the boundary common to day and night; and in the same way morning constitutes the approach of night to day. It was to give day the privileges of seniority that Scripture put the end of the first day before that of the first night, because night follows day: for, before the creation of light, the world was not in night, but in darkness. It is the opposite of day which was called night, and it did not receive its name until after day. Thus were created the evening and the morning. Scripture means the space of a day and a night



As I said then, this language is only a wise and ingenious contrivance to set our minds seeking the Person to whom the words are addressed. In the second place, does the firmament that is called heaven differ from the firmament that God made in the beginning? Are there two heavens? The philosophers, who discuss heaven, would rather lose their tongues than grant this. There is only one heaven, they pretend; and it is of a nature neither to admit of a second, nor of a third, nor of several others. The essence of the celestial body quite complete constitutes its vast unity. Because, they say, every body which has a circular motion is one and finite. And if this body is used in the construction of the first heaven, there will be nothing left for the creation of a second or a third. Here we see what those imagine who put under the Creator's hand uncreated matter; a lie that follows from the first fable. But we ask the Greek sages not to mock us before they are agreed among themselves. Because there are among them some who say there are infinite heavens and worlds. When grave demonstrations shall have upset their foolish system, when the laws of geometry shall have established that, according to the nature of heaven, it is impossible that there should be two, we shall only laugh the more at this elaborate scientific trifling. These learned men see not merely one bubble but several bubbles formed by the same cause, and they doubt the power of creative wisdom to bring several heavens into being! We find, however, if we raise our eyes towards the omnipotence of God, that the strength and grandeur of the heavens differ from the drops of water bubbling on the surface of a fountain. How ridiculous, then, is their argument of impossibility! As for myself, far from not believing in a second, I seek for the third whereon the blessed Paul was found worthy to gaze. And does not the Psalmist in saying "heaven of heavens" give us an idea of their plurality? Is the plurality of heaven stranger than the seven circles through which nearly all the philosophers agree that the seven planets pass,--circles which they represent to us as placed in connection with each other like casks fitting the one into the other? These circles, they say, carried away in a direction contrary to that of the world, and striking the aether, make sweet and harmonious sounds, unequalled by the sweetest melody. And if we ask them for the witness of the senses, what do they say? That we, accustomed to this noise from our birth, on account of hearing it always, have lost the sense of it; like men in smithies with their ears incessantly dinned. If I refuted this ingenious frivolity, the untruth of which is evident from the first word, it would seem as though I did not know the value of time, and mistrusted the intelligence of such an audience.

But let me leave the vanity of outsiders to those who are without, and return to the theme proper to the Church. If we believe some of those who have preceded us, we have not here the creation of a new heaven, but a new account of the first. The reason they give is, that the earlier narrative briefly described the creation of heaven and earth; while here scripture relates in greater detail the manner in which each was created. I, however, since Scripture gives to this second heaven another name and its own function, maintain that it is different from the heaven which was made at the beginning; that it is of a stronger nature and of an especial use to the universe...

***And God said, let there be a firmament in the midst of the waters, and let it divide the waters from the waters. And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament.***

Before laying hold of the meaning of Scripture let us try to meet objections from other quarters.

We are asked:

- How, if the firmament is a spherical body, as it appears to the eye, its convex circumference can contain the water which flows and circulates in higher regions?

What shall we answer?

One thing only: because the interior of a body presents a perfect concavity it does not necessarily follow that its exterior surface is spherical and smoothly rounded. Look at the stone vaults of baths, and the structure of buildings of cave form; the dome, which forms the interior, does not prevent the roof from having ordinarily a flat surface. Let these unfortunate men cease, then, from tormenting us and themselves about the impossibility of our retaining water in the higher regions. Now we must say something about the nature of the firmament, and why it received the order to hold the middle place between the waters. Scripture constantly makes use of the word firmament to express extraordinary strength. "The Lord my firmament and refuge." "I have strengthened the pillars of it." "Praise him in the firmament of his power." The heathen writers thus call a strong body one which is compact and full, to distinguish it from the mathematical body. A mathematical body is a body which exists only in the three dimensions, breadth, depth, and height. A firm body, on the contrary, adds resistance to the dimensions. It is the custom of Scripture to call firmament all that is strong and unyielding. It even uses the word to denote the condensation of the air: He, it says, who strengthens the thunder. Scripture means by the strengthening of the thunder, the strength and resistance of the wind, which, enclosed in the hollows of the clouds, produces the noise of thunder when it breaks through with violence. Here then, according to me, is a firm substance, capable of retaining the fluid and unstable element water; and as, according to the common acceptation, it appears that the firmament owes its origin to water, we must not believe that it resembles frozen water or any other matter produced by the filtration of water; as, for example, rock crystal, which is said to owe its metamorphosis to excessive congelation, or the transparent stone which forms in mines. This pellucid stone, if one finds it in its natural perfection, without cracks inside, or the least spot of corruption, almost rivals the air in clearness. We cannot compare the firmament to one of these substances. To hold such an opinion about celestial bodies would be childish and foolish; and although everything may be in everything, fire in earth, air in water, and of the other elements the one in the other; although none of those which come under our senses are pure and without mixture, either with the element which serves as a medium for it, or with that which is contrary to it; I, nevertheless, dare not affirm that the firmament was formed of one of these simple substances, or of a mixture of them, for I am taught by Scripture not to allow my imagination to wander too far afield. But do not let us forget to remark that, after these divine words "let there be a firmament," it is not said "and the firmament was made" but, "and God made the firmament, and divided the waters."

Hear, O ye deaf! See, O ye blind!--who, then, is deaf? He who does not hear this startling voice of the Holy Spirit. Who is blind? He who does not see such clear proofs of the Only begotten. "Let there be a firmament." It is the voice of the primary and principal Cause. "And God made the firmament." Here is a witness to the active and creative power of God.

But let us continue our explanation:

***Let it divide the waters from the waters!***

The mass of waters, which from all directions flowed over the earth, and was suspended in the air, was infinite, so that there was no proportion between it and the other elements. Thus, as it has

been already said, the abyss covered the earth. We give the reason for this abundance of water. None of you assuredly will attack our opinion; not even those who have the most cultivated minds, and whose piercing eye can penetrate this perishable and fleeting nature; you will not accuse me of advancing impossible or imaginary theories, nor will you ask me upon what foundation the fluid element rests. By the same reason which makes them attract the earth, heavier than water, from the extremities of the world to suspend it in the centre, they will grant us without doubt that it is due both to its natural attraction downwards and its general equilibrium, that this immense quantity of water rests motionless upon the earth.

Therefore the prodigious mass of waters was spread around the earth; not in proportion with it and infinitely larger, thanks to the foresight of the supreme Artificer, Who, from the beginning, foresaw what was to come, and at the first provided all for the future needs of the world.

- But what need was there for this superabundance of water?

- The essence of fire is necessary for the world, not only in the economy of earthly produce, but for the completion of the universe; for it would be imperfect if the most powerful and the most vital of its elements were lacking. Now fire and water are hostile to and destructive of each other. Fire, if it is the stronger, destroys water, and water, if in greater abundance, destroys fire. As, therefore, it was necessary to avoid an open struggle between these elements, so as not to bring about the dissolution of the universe.

Reject then the foolish wisdom of this world, and receive with me the more simple but infallible doctrine of truth.

***Let there be a firmament in the midst of the waters, and let it divide the waters from the waters!***

I have said what the word "firmament" in Scripture means. It is not in reality a "firm" and solid substance which has weight and resistance; this name would otherwise have better suited the earth. But, as the substance of superincumbent bodies is light, without consistency, and cannot be grasped by any one of our senses, it is in comparison with these pure and imperceptible substances that the firmament has received its name. Imagine a place fit to divide the moisture, sending it, if pure and filtered, into higher regions, and making it fall, if it is dense and earthy; to the end that by the gradual withdrawal of the moist particles the same temperature may be preserved from the beginning to the end. You do not believe in this prodigious quantity of water; but you do not take into account the prodigious quantity of heat, less considerable no doubt in bulk, but exceedingly powerful nevertheless, if you consider it as destructive of moisture. It attracts surrounding moisture, as the melon shows us, and consumes it as quickly when attracted, as the flame of the lamp draws to it the fuel supplied by the wick and burns it up. Who doubts that the aether is an ardent fire? If an impassable limit had not been assigned to it by the Creator, what would prevent it from setting on fire and consuming all that is near it, and absorbing all the moisture from existing things? The aerial waters which veil the heavens with vapours that are sent forth by rivers, fountains, marshes, lakes, and seas, prevent the aether from invading and burning up the universe. Thus we see even this sun, in the summer season, dry up in a moment a damp and marshy country, and make it perfectly arid.

- What has become of all the water?

- Let these masters of omniscience tell us. Is it not plain to every one that it has risen in vapour, and has been consumed by the heat of the sun? - --They say, none the less, that even the sun is without heat.

- What time they lose in words! And see what proof they lean upon to resist what is perfectly plain. Its colour is white, and neither reddish nor yellow. It is not then fiery by nature, and its heat results, they say, from the velocity of its rotation. What do they gain? That the sun does not seem to absorb moisture? I do not, however, reject this statement, although it is false, because it helps my argument. I said that the consumption of heat required this prodigious quantity of water. That the sun owes its heat to its nature, or that heat results from its action, makes no difference, provided that it produces the same effects upon the same matter. If you kindle fire by rubbing two pieces of wood together, or if you light them by holding them to a flame, you will have absolutely the same effect. Besides, we see that the great wisdom of Him who governs all, makes the sun travel from one region to another, for fear that, if it remained always in the same place, its excessive heat would destroy the order of the universe. Now it passes into southern regions about the time of the



winter solstice, now it returns to the sign of the equinox; from thence it betakes itself to northern regions during the summer solstice, and keeps up by this imperceptible passage a pleasant temperature throughout all the world.

Now if our explanation of the creation of the world may appear contrary to experience, (because it is evident that all the waters did not flow together in one place,) many answers may be made, all obvious as soon as they are stated. Perhaps it is even ridiculous to reply to such objections.

***And God said: "Let the waters be gathered together unto one place and let the dry land appear."***

He did not say "let the earth appear", so as not to show itself again without form, mud-like, and in combination with the water, nor yet endued with proper form and virtue. At the same time, lest we should attribute the drying of the earth to the sun, the Creator shows it to us dried before the creation of the sun. Let us follow the thought Scripture gives us. Not only the water which was covering the earth flowed off from it, but all that which had filtered into its depths withdrew in obedience to the irresistible order of the sovereign Master...



***Let the earth bring forth green grass.***

Let the earth bring forth by itself without having any need of help from without. Some consider the sun as the source of all productiveness on the earth. It is, they say, the action of the sun's heat which attracts the vital force from the centre of the earth to the surface. The reason why the adornment of the earth was before the sun is the following; that those who worship the sun, as the source of life, may renounce their error. If they be well persuaded that the earth was adorned before the genesis of the sun, they will retract their unbounded admiration for it, because they see grass and plants vegetate before it rose...

This is what is meant by "after its kind." So that the shoot of a reed does not produce an olive tree, but from a reed grows another reed, and from one sort of seed a plant of the same sort always germinates. Thus, all which sprang from the earth, in its first bringing forth, is kept the same to our time, thanks to the constant reproduction of "kind"...

In a moment earth began by germination to obey the laws of the Creator, completed every stage of growth, and brought germs to perfection. The meadows were covered with deep grass, the fertile plains quivered with harvests, and the movement of the corn was like the waving of the sea. Every plant, every herb, the smallest shrub, the least vegetable, arose from the earth in all its luxuriance. There was no failure in this first vegetation: no husbandman's inexperience, no inclemency of the weather, nothing could injure it; then the sentence of condemnation (Genesis 3:17-18) was not fettering the earth's fertility. All this was before the sin which condemned us to eat our bread by the sweat of our brow (Genesis 3:19).

***Let the earth bring forth***

This short command was in a moment a vast nature, an elaborate system. Swifter than thought it produced the countless qualities of plants. It is this command which, still at this day, is imposed on the earth, and in the course of each year displays all the strength of its power to produce herbs,

seeds and trees. Like tops, which after the first impulse, continue their evolutions, turning upon themselves when once fixed in their centre; thus nature, receiving the impulse of this first command, follows without interruption the course of ages, until the consummation of all things...

**"Let the earth," the Creator adds, "bring forth the fruit tree yielding fruit after his kind, whose seed is in itself."**

At this command every copse was thickly planted; all the trees, fir, cedar, cypress, pine, rose to their greatest height [...], in one moment they came into being, each one with its distinctive peculiarities. Most marked differences separated them from other plants, and each one was distinguished by a character of its own...

"Let the earth bring forth the fruit tree yielding fruit." Immediately the tops of the mountains were covered with foliage: paradises were artfully laid out, and an infinitude of plants embellished the banks of the rivers.

"Let the earth bring forth" This short command was in a moment a vast nature, an elaborate system. Swifter than thought it produced the countless qualities of plants.



In the revolutions of the moon we find anew proof of what we have advanced. When it stops and grows less it does not consume itself in all its body, but in the measure that it deposits or absorbs the light which surrounds it, it presents to us the image of its decrease or of its increase. If we wish an evident proof that the moon does not consume its body when at rest, we have only to open our eyes. If you look at it in a cloudless and clear sky, you observe, when it has taken the complete form of a crescent, that the part, which is dark and not lighted up, describes a circle equal to that which the full moon forms. Thus the eye can take in the whole circle, if it adds to the illuminated part this obscure and dark curve. And do not tell me that the light of the moon is borrowed, diminishing or increasing in proportion as it approaches or recedes from the sun. That is not now the object of our research; we only wish to prove that its body differs from the light which makes it shine. I wish you to have the same idea of the sun; except however that the one, after having once received light and having mixed it with its substance, does not lay it down again, whilst the other, turn by turn, putting off and reclothing itself again with light, proves by that which takes place in itself what we have said of the sun.





The sun and moon thus received the command to divide the day from the night. God had already separated light from darkness; then He placed their natures in opposition, so that they could not mingle, and that there could never be anything in common between darkness and light. You see what a shadow is during the day; that is precisely the nature of darkness during the night. If, at the appearance of a light, the shadow always falls on the opposite side; if in the morning it extends towards the setting sun; if in the evening it inclines towards the rising sun, and at mid-day turns towards the north; night retires into the regions opposed to the rays of the sun, since it is by nature only the shadow of the earth. Because, in the same way that, during the day, shadow is produced by a body which intercepts the light, night comes naturally when the air which surrounds the earth is in shadow. And this is precisely what Scripture says, "God divided the light from the darkness." Thus darkness fled at the approach of light, the two being at their first creation divided by a natural antipathy. Now God commanded the sun to measure the day, and the moon, whenever she rounds her disc, to rule the night. For then these two luminaries are almost diametrically opposed; when the sun rises, the full moon disappears from the horizon, to re-appear in the east at the moment the sun sets.

***And let them be for signs, and for seasons, and for days and years***

We have spoken about signs. By times, we understand the succession of seasons, winter, spring, summer and autumn, which we see follow each other in so regular a course, thanks to the regularity of the movement of the luminaries. It is winter when the sun sojourns in the south and produces in abundance the shades of night in our region. The air spread over the earth is chilly, and the damp exhalations, which gather over our heads, give rise to rains, to frosts, to innumerable flakes of snow. When, returning from the southern regions, the sun is in the middle of the heavens and divides day and night into equal parts, the more it sojourns above the earth the more it brings back a mild temperature to us. Then comes spring, which makes all the plants germinate, and gives to the greater part of the trees their new life, and, by successive generation, perpetuates all the land and water animals. From thence the sun, returning to the summer solstice, in the direction of the North, gives us the longest days. And, as it travels farther in the air, it burns that which is over our heads, dries up the earth, ripens the grains and hastens the maturity of the fruits of the trees. At the epoch of its greatest heat, the shadows which the sun makes at mid-day are short, because it shines from above, from the air over our heads...

Thus the longest days are those when the shadows are shortest, in the same way that the shortest days are those when the shadows are longest. It is this which happens to all of us "Hetero-skii" (shadowed-on-one-side) who inhabit the northern regions of the earth. But there are people who, two days in the year, are completely without shade at mid-day, because the sun, being perpendicularly over their heads, lights them so equally from all sides, that it could through a narrow opening shine at the bottom of a well. Thus there are some who call them "askii" (shadowless). For those who live beyond the land of spices see their shadow now on one side, now on another, the only inhabitants of this land of which the shade falls at mid-day; thus they are given the name of "amphiskii," (shadowed-on-both-sides). All these phenomena happen whilst the sun is passing into northern regions: they give us an idea of the heat thrown on the air, by the rays of the sun and of the effects that they produce. Next we pass to autumn, which breaks up the excessive heat, lessening the warmth little by little, and by a moderate temperature brings us back without suffering to winter, to the time when the sun returns from the northern regions to the

southern. It is thus that seasons, following the course of the sun, succeed each other to rule our life.

"Let them be for days" says Scripture, not to produce them but to rule them; because day and night are older than the creation of the luminaries and it is this that the psalm declares to us. "The sun to rule by day... the moon and stars to rule by night."

- How does the sun rule by day?

- Because carrying everywhere light with it, it is no sooner risen above the horizon than it drives away darkness and brings us day. Thus we might, without self deception, define day as air lighted by the sun, or as the space of time that the sun passes in our hemisphere. The functions of the sun and moon serve further to mark "years". The moon, after having twelve times run her course, forms a year which sometimes needs an intercalary month to make it exactly agree with the seasons. Such was formerly the year of the Hebrews and of the early Greeks. As to the solar year, it is the time that the sun, having started from a certain sign, takes to return to it in its normal progress.

***And God made two great lights.***

The word "great," if, for example we say it of the heaven of the earth or of the sea, may have an absolute sense; but ordinarily it has only a relative meaning, as a great horse, or a great ox. It is not that these animals are of an immoderate size, but that in comparison with their like they deserve the title of great. What idea shall we ourselves form here of greatness? Shall it be the idea that we have of it in the ant and in all the little creatures of nature, which we call great in comparison with those like themselves, and to show their superiority over them? Or shall we predicate greatness of the luminaries, as of the natural greatness inherent in them? As for me, I think so. If the sun and moon are great, it is not in comparison with the smaller stars, but because they have such a circumference that the splendour which they diffuse lights up the heavens and the air, embracing at the same time earth and sea. In whatever part of heaven they may be, whether rising, or setting, or in mid heaven, they appear always the same in the eyes of men, a manifest proof of their prodigious size. For the whole extent of heaven cannot make them appear greater in one place and smaller in another. Objects which we see afar off appear dwarfed to our eyes, and in measure as they approach us we can form a juster idea of their size. But there is no one who can be nearer or more distant from the sun. All the inhabitants of the earth see it at the same distance. Indians and Britons see it of the same size. The people of the East do not see it decrease in magnitude when it sets; those of the West do not find it smaller when it rises. If it is in the middle of the heavens it does not vary in either aspect.

Could the earth with such a wide extent be lighted up entirely in one moment if an immense disc were not pouring forth its light over it? Recognise here the wisdom of the Artificer. See how He made the heat of the sun proportionate to this distance. Its heat is so regulated that it neither consumes the earth by excess, nor lets it grow cold and sterile by defect.

To all this the properties of the moon are near akin; she, too, has an immense body, whose splendour only yields to that of the sun. Our eyes, however, do not always see her in her full size. Now she presents a perfectly rounded disc, now when diminished and lessened she shows a deficiency on one side. When waxing she is shadowed on one side, and when she is waning another side is hidden. Now it is not without a secret reason of the divine Maker of the universe, that the moon appears from time to time under such different forms. It presents a striking example of our nature. Nothing is stable in man; here from nothingness he raises himself to perfection; there after having hasted to put forth his strength to attain his full greatness he suddenly is subject to gradual deterioration, and is destroyed by diminution. Thus, the sight of the moon, making us think of the rapid vicissitudes of human things, ought to teach us not to pride ourselves on the good things of this life, and not to glory in our power, not to be carried away by uncertain riches, to despise our flesh which is subject to change, and to take care of the soul, for its good is unmoved. If you cannot behold without sadness the moon losing its splendour by gradual and imperceptible decrease, how much more distressed should you be at the sight of a soul, who, after having possessed virtue, loses its beauty by neglect, and does not remain constant to its affections, but is agitated and constantly changes because its purposes are unstable. What Scripture says is very true, "As for a fool he changeth as the moon."

I believe also that the variations of the moon do not take place without exerting great influence upon the organization of animals and of all living things. This is because bodies are differently

disposed at its waxing and waning. When she wanes they lose their density and become void. When she waxes and is approaching her fullness they appear to fill themselves at the same time with her, thanks to an imperceptible moisture that she emits mixed with heat, which penetrates everywhere. For proof, see how those who sleep under the moon feel abundant moisture filling their heads; see how fresh meat is quickly turned under the action of the moon; see the brain of animals, the moistest part of marine animals, the pith of trees. Evidently the moon must be, as Scripture says, of enormous size and power to make all nature thus participate in her changes.

On its variations depends also the condition of the air, as is proved by sudden disturbances which often come after the new moon, in the midst of a calm and of a stillness in the winds, to agitate the clouds and to hurl them against each other; as the flux and reflux in straits, and the ebb and flow of the ocean prove, so that those who live on its shores see it regularly following the revolutions of the moon. The waters of straits approach and retreat from one shore to the other during the different phases of the moon; but, when she is new, they have not an instant of rest, and move in perpetual swaying to and fro, until the moon, reappearing, regulates their reflux. As to the Western sea, we see it in its ebb and flow now return into its bed, and now overflow, as the moon draws it back by her respiration and then, by her expiration, urges it to its own boundaries.

I have entered into these details, to show you the grandeur of the luminaries, and to make you see that, in the inspired words, there is not one idle syllable. And yet my sermon has scarcely touched on any important point; there are many other discoveries about the size and distance of the sun and moon to which any one who will make a serious study of their action and of their characteristics may arrive by the aid of reason. Let me then ingenuously make an avowal of my weakness, for fear that you should measure the mighty works of the Creator by my words. The little that I have said ought the rather to make you conjecture the marvels on which I have omitted to dwell. We must not then measure the moon with the eye, but with the reason. Reason, for the discovery of truth, is much surer than the eye.

Everywhere ridiculous old women's tales, imagined in the delirium of drunkenness, have been circulated; such as that enchantments can remove the moon from its place and make it descend to the earth. How could a magician's charm shake that of which the Most High has laid the foundations? And if once torn out what place could hold it? Do you wish from slight indications to have a proof of the moon's size? All the towns in the world, however distant from each other, equally receive the light from the moon in those streets that are turned towards its rising. If she did not look on all face to face, those only would be entirely lighted up which were exactly opposite; as to those beyond the extremities of her disc, they would only receive diverted and oblique rays. It is this effect which the light of lamps produces in houses; if a lamp is surrounded by several persons, only the shadow of the person who is directly opposite to it is cast in a straight line, the others follow inclined lines on each side. In the same way, if the body of the moon were not of an immense and prodigious size she could not extend herself alike to all. In reality, when the moon rises in the equinoctial regions, all equally enjoy her light, both those who inhabit the icy zone, under the revolutions of the Bear, and those who dwell in the extreme south in the neighbourhood of the torrid zone. She gives us an idea of her size by appearing to be face to face with all people. Who then can deny the immensity of a body which divides itself equally over such a wide extent?

But enough on the greatness of the sun and moon. May He Who has given us intelligence to recognise in the smallest objects of creation the great wisdom of the Contriver make us find in great bodies a still higher idea of their Creator. However, compared with their Author, the sun and moon are but a fly and an ant. The whole universe cannot give us a right idea of the greatness of God; and it is only by signs, weak and slight in themselves, often by the help of the smallest insects and of the least plants, that we raise ourselves to Him.



...The command was given, and immediately the rivers and lakes becoming fruitful brought forth their natural broods; the sea travailed with all kinds of swimming creatures; not even in mud and marshes did the water remain idle; it took its part in creation...

...but in genesis each being proceeds from its like, and not from its contrary...

Numbers of other vegetables are the same and all over the earth reproduce by the roots. Nothing then is truer than that each plant produces its seed or contains some seminal virtue; this is what is meant by "after its kind." So that the shoot of a reed does not produce an olive tree, but from a reed grows another reed, and from one sort of seed a plant of the same sort always germinates. Thus, all which sprang from the earth, in its first bringing forth, is kept the same to our time, thanks to the constant reproduction of kind...

As to the danel and all those bastard grains which mix themselves with the harvest, the tares of Scripture, far from being a variety of corn, have their own origin and their own kind...

At these words "Let the earth bring forth," it did not produce a germ contained in it, but He who gave the order at the same time gifted it with the grace and power to bring forth. When the earth had heard this command "Let the earth bring forth grass and the tree yielding fruit," it was not grass that it had hidden in it that it caused to spring forth, it did not bring to the surface a palm tree, an oak, a cypress, hitherto kept back in its depths. It is the word of God which forms the nature of things created...

As a ball, which one pushes, if it meet a declivity, descends, carried by its form and the nature of the ground and does not stop until it has reached a level surface; so nature, once put in motion by the Divine command, traverses creation with an equal step, through birth and death, and keeps up the succession of kinds through resemblance, to the last. Nature always makes a horse succeed to a horse, a lion to a lion, an eagle to an eagle, and preserving each animal by these uninterrupted successions she transmits it to the end of all things... Thus when the soul of brutes appeared it was not concealed in the earth, but it was born by the command of God...