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SUPPLEMENT

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The Catholic Creationist

An Outline -- Summary of Patristic
and Medieval Thought on the *Hexaemeron*

and

An Outline -- Summary of the *Hexaemeron* of St. Basil

both by Rev. William A. Wallace, O.P.

with

Additional comments

by Paula Haigh

After herein presenting the bulk of Fr. Wallace's work on this subject, Miss Haigh gives her own additional comments, an example of which is . . .

> **…if you give the evolutionist the time he wants -- and must have -- then you might as well give him the whole bag and stop deluding yourself that you are holding to a "mitigated" or "moderate" or "restricted" form of evolution and, having given him his time, if you have not fallen off the fence completely, you are surely leaning headlong over on the evolutionary side. And Mr. Evolutionist is waiting there to welcome you with open arms.**
>
> Paul Haigh

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Miss Haigh was founder and director of *Catholic Center for Creation Research* which was functional for a few prolific years in the late 1970's. This essay was originally in booklet format. Photocopying is made more convenient by this 8-1/2 x 11 format. Recipients are encouraged to photocopy and circulate.

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An authoritative summation of Patristic and medieval thought by the Rev. William A. Wallace, O.P., is here presented for the purpose of indicating traditional, doctrinally safe interpretations of Genesis One and the seven days of Creation Week. The summation is taken from Fr. Wallace's Appendices 7 through 10 in volume 10 of *The Blackfriars Summa* (McGraw-Hill) covering Questions 65-74 of the *Prima Pars*. Of the truly Catholic, that is, doctrinally safe positions outlined here, none is evolutionary.

Hexaemeron (the Six Days of Creation)

Rev. William A. Wallace, O.P.

Allegorical Interpretations

It was not by accident that the allegorical exegesis of the creation account found its first development at Alexandria. The Jewish theologians who had flourished there favoured this type of interpretation. **Philo** (born c. 25 B.C.), in particular, interpreted the account of the creation of the world and of man as symbolic and figurative. He taught that creation was instantaneous and that the six days of Genesis were a device for expressing the perfection of order to be found in the universe. Undoubtedly influenced by Philo, **Clement of Alexandria** (c. 200) held that all things were produced simultaneously by God and that the distinction of days was not to be taken as marking a temporal succession, but rather as a method of exposition adapted to human intelligence to indicate various gradations in being. **Origen** likewise took up the theme of simultaneous creation, which was thenceforth to occupy the attention of many exegetes. It is noteworthy that Origen was born at Alexandria while **Ptolemy** was perhaps still living, and that he taught in a school that was guided by the thought of the great astronomer. Origen wrote a commentary on Genesis, and from the fragments that survive, it appears that he understood the astronomy of his day quite well; because of the allegorical character of his teaching, however, it is difficult to know how he evaluated the Ptolemaic theories. Other Alexandrians worthy of mention include **St. Athanasius** (373), who held that all species had been created together and by the same command, and **St. Cyril** (444), who, while sympathetic to the methods of the school, was somewhat more reserved in his conclusions.

Literal Interpretations

In contrast to the school of Alexandria, the Syrian schools mistrusted allegorical interpretations and sought the literal sense of Sacred Scripture. **St. Ephraem** (373), the most illustrious member of the school of Edessa, clearly took the literal approach in his commentaries on Genesis. He rejected simultaneous creation and held for a real distinction of the six days, each composed of twenty-four hours. He regarded the different works assigned to each day as succeeding each other exactly as narrated. Light was created on the first day, but only as a diffused type of entity that would become associated with the stars on the fourth day.

The Fathers of Antioch followed similar interpretations. **St. John Chrysostom** has sixty-seven homilies on Genesis, attempting to explain its literal sense; the first seven are on aspects of the *Hexaemeron*. These oratorical works, excellent for their religious and moral exhortation, contain little of scientific interest; he does reject simultaneous creation.

The Cappadocian Fathers, **St. Gregory** of Nazianzus (c. 390), **St. Basil** and **St. Gregory** of Nyssa (c. 395), adopted an intermediate position in their exegesis of the sacred text, inclining somewhat closer to the literal sense but at the same time preserving elements of the allegorical explanation. Thus they recognized a single primordial creation of elementary matter, while they chose a realistic interpretation of the work of six days occupying a period of successive duration. They spoke of simultaneous creation, but meaning the production of formless matter, to be finished by the works of the six days.

Both the Cappadocians and the Alexandrians, it may be noted, attempted to take account of the science of the day. Although St. Basil frequently adopted a superior air when discussing scientific

theories, his training in medicine gave him a fair competence in scientific matters and he rarely contradicted opinions that were commonly held. St. Gregory of Nyssa, the brother St. Basil, composed a treatise on the *Hexaemeron* that was more logical and systematic than Basil's work. It differed from preceding accounts by seeing the work of the six days as essentially a cosmogony. Assuming the creation of the four elements, in the Empedoclean and Aristotelean sense, Gregory deduced the entire nature of the universe and its constituents from the elementary properties of fire, air, water and earth. Thus, with these Cappadocians, we find one of the first serious attempts at a scientific concordism among the Church Fathers.

St. Basil and John Philoponus

Among Greek writers, **St. Basil** and **John Philoponus** merit detailed consideration, since their works exerted considerable influence during the medieval period. St. Basil's nine homilies on the *Hexaemeron*, which in their original version had been preceded by the complete commentary of Origen on Genesis, became the prototype for a whole series of commentaries extending to that of St. Thomas.

As a rule, these treatises enabled the author to use the text of Genesis as a basis for developing his own scientific and philosophical views on problems relating to the corporeal universe. Similarly, the warnings of **John Philoponus** set a pattern for later thinkers, who would use ingenious arguments to show that there need not be contradiction between their science and their Christian faith.

St. Basil's homilies were preached at Caesarea around the year 370 to congregations that included at least some educated people. Both apologetic and practical in intent, they proposed to explain the Biblical account of origins and at the same time reply to difficulties that might be raised by the learned. The exposition follows the order of the text, but there are frequent digressions, some clearly designed to make moral application of the doctrine.

The foremost Greek thinker to attempt a systematic concordism between Genesis and the science of his time was the Christian physicist, philosopher and theologian, the Monophysite **John Philoponus**. In his *De Opificio Mundi*, composed between 546 and 549 and addressed to the Patriarch Sergius, Philoponus attempted to show that there need be no contradiction between science and Scripture. … Philoponus' interpretation of the account in Genesis is that on the first day God created heaven and earth, where heaven is to be understood as the ninth sphere that carries no stars but is used by astronomers to explain the precession of the equinoxes. On the second day, God created another sphere below the ninth sphere that likewise carries no stars and is called the firmament; it is composed mostly of waters that are crystalline and transparent, water and air being significantly the only transparent elements.

Waters are said to be above the heavens, but this is an analogous use of the term 'water', because matter in the region above the heavens is fluid and transparent. The work of the later days then consists in placing the stars and the heavenly bodies in their respective spheres; the spheres are viewed in tentative fashion, as hypotheses proposed by astronomers. The general thesis throughout is that Moses has provided men, from the very dawn of civilization, with an understanding of matters it has taken astronomers centuries to find out.

The last of the great Greek Fathers, **St. John Damascene** (c. 749), treated some of the questions discussed by his predecessors in his *De Fide Orthodoxa*, which was later to serve as a model for the *Sentences* of Peter Lombard. Its comprehensive plan included the study of the angels, the visible heavens, the stars, the elements, the earth and man. Not claiming to be an original work in philosophy, it incorporated much that was best in the earlier accounts, and this, coupled with his

knowledge of Aristotle, made Damascene's work a handy source for the great scholastic theologians of later centuries, including St. Thomas.

Latin Writers

The Latin writers do not fit easily into such clear-cut groups as do the Greeks. For the most part, the Fathers of the Church in the West propounded the ideas of their counterparts in the East. Thus **St. Hilary** (367-368) borrowed from the Alexandrians their notion of simultaneous creation. **St. Ambrose**, in his series of sermons on the six days preached at Milan during the Lent of 389, based his exposition on that of St. Basil, and became one of the principal sources of Cappadocian exegesis among the Latins. He held that the elements were created at the first instant, but that the development of this initial production came on the days that followed, which were days in the true sense. Like many of the Latins, St. Ambrose was eclectic; his interpretations of Scripture frequently concentrated on the spiritual sense, and he seemed interested in facts mainly for the moral lessons they suggested.

By far the most important of the Latin Fathers for his influence on medieval exegesis is **St. Augustine**. Whereas earlier Latins had tended toward a literal interpretation, Augustine introduced a new mode of symbolic interpretation that opened up vast possibilities for the middle ages. [Possibilities or complications? Ph.]

Boethius (525) is another Latin writer who exerted an influence on St. Thomas. In his *De Consolatione Philosophiae*, a resumé of Plato's *Timaeus* as annotated by Calcidius, he explained how God adorned chaotic matter with forms patterned on the ideas, and sketched clearly the doctrine of numbers, of the elements, and of the World Soul as presented by Neoplatonic writers. Boethius further exerted influence through his scientific treatises, which promoted an interest in Aristotle's scientific methodology during the later middle ages.

Saint Augustine

Three times -- in his famous commentaries on Genesis: *De Genesi contra Manichaeos* (388-390), *De Genesi ad litteram liber imperfectus* (393-394) and *De Genesi ad litteram libri XII* (401-415) -- St Augustine attempted a detailed exegesis of the creation account. In three books of his *Confessions* (XI-XIII) he touches on similar topics, and he returns again to the creation theme in the *City of God* (Book XI). So extensive were his writings that it is difficult to summarize them; the following singles out only a few of the significant contributions they contain.

First it is noteworthy that St. Augustine, although no more intent on composing a scientific treatise than the other Fathers, was better acquainted with the secular thought of his day, particularly when it raised questions relating to the faith. In fact, one of the preoccupations of his life, as is clear from the *City of God*, was to enter into dialogue with the pagan wisdom of his contemporaries. On questions of exegesis, he is eclectic; he uses the allegorical interpretation, yet he criticizes the abuse of this, and the *De Genesi ad litteram* is less allegorical than the interpretation in the *Confessions*. His genius and originality were so striking that one would be ill-advised to locate him in any particular school; rather, he himself was the source of a line of thought that was to dominate much of the later middle ages.

In the beginning means that the world could not have existed from eternity and that time had a beginning. Heaven and earth includes all creatures, both spiritual (indicated by the word *heaven*) and corporeal (indicated by the word *earth*); the creation of both is placed at the very outset. Thus Augustine makes use of the Alexandrian notion of simultaneous creation that from the very first

instant everything was created.

As a consequence, there is no place in Augustine's account for productions that are completely new, which explains why the remainder of the account does not apply to real days, or to successive intervals of time, but must be interpreted in a more subtle way. Among the varying interpretations St. Augustine turns to, St. Thomas often repeats the one in which the days signify series of illuminations by which God successively acquainted the angels with works he had accomplished in one instant; the evening signifies the direct knowledge of things by the angels; and the morning, the more perfect knowledge acquired when the angels contemplate them in the Word.

Also characteristic of St. Augustine is his exegesis of the earth's being invisible and unformed (*Invisibilis et incomposita*). He explains at length how difficult it is to understand something that is completely without form, which thus must be conceived as almost nothing; his solution is that the formlessness in the sacred text should not be understood as a lack of all form, but of a more perfect form. Thus God created everything with a matter and with some kind of form, without any interval of time between the creations of different things. The various days of creation do not indicate a temporal priority but merely a relationship in a pattern of meaning (*ordo naturae*) or of logical development.

Nonetheless, for Augustine, the universe did develop and thus has a history. Few of the forms created on the first day existed then in their full state of completeness; many, particularly those of living things, existed only germinally or in their causes. Hence Augustine was able to use the Stoic and Neoplatonic notion of 'seminal reasons' and the restricted form of evolution it implied.

These ideas, like many others expressed by Augustine, proved remarkably influential in the development of western Christianity. Incorporated, as they were, with the various lessons of 'other Fathers', they could not help but generate an eclecticism that characterized expositions of the *Hexaemeron* in the middle ages.

Because the *Hexaemeron* of St. Basil became the prototype for many *hexaemera* that followed, I present here a summary of his teaching, as much as possible in his own words.

1) St. Basil begins by contrasting the speculations of pagan-atheistic philosophers with the word of truth presented by Moses in Holy Scripture.

> Let us listen then to these words of truth written without the help of the enticing words of man's wisdom' (but) by the dictation of the Holy Spirit; words destined to produce not the applause of those who hear them, but the salvation of those who are instructed by them. "In the beginning God created heaven and earth."

This **heaven** of heaven and earth is, for St. Basil, the air of the four elements.

> 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," (51:6 Septuagint) that is to say, He created a subtle substance, without solidity or density, from which to form the heavens.

But it may also refer to the world of the angels for, according to St. Basil, God created the world of the angels first and then,

> To this world at last it was necessary to add a new world, both a school and a training class where the souls of men should be taught and a home for beings destined to be born and to die. Thus was created, … the succession of time, …

St. Basil also teaches the simultaneous creation of all things in the beginning. "All intermediate beings were created at the same times as the extremities" of heaven and earth. Also, the universe is geocentric:

> Do not then be surprised that the world never falls: it occupies the centre of the universe, its natural

> place. By all 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.

2) The second homily begins with the words "The earth was invisible and unfinished." St. Basil marvels at the “depth of thought” in Scripture but

> …do not let us hesitate to continue our researches. Although we may not attain to the truth, if, with the help of the Spirit, we do not fall away from the meaning of Holy Scripture we shall not deserve to be rejected, and, with the help of grace, we shall contribute to the edification of the Church of God.

He notes that the earth is invisible and unfinished, unfinished because “The fertility of the earth is its perfect finishing” and since no trees or flowers yet exist it is rightly described as “without form”. Also, the heavens are still imperfect, lacking the glory of the sun, moon and stars, as “These bodies were not yet created.” And the earth is invisible because as yet it is still hidden under the waters. He then inveighs against those who hold the eternity of matter or that matter is uncreated.

> Here below arts are subsequent to matter -- …But God, before all those things ... existed, after casting about in His mind and determining to bring into being that which had no being, imagined the world such as it ought to be, and created matter in harmony with the form which He wished to give it. ... Finally, He welded all the diverse parts of the universe by links of indissoluble attachment and established between them so perfect a fellowship and harmony that the most distant, in spite of their distance, appeared united in one universal sympathy.

He then refutes those who would hold that God is the Creator and originator of evil because of the “Darkness that was upon the face of the deep.”

> It is equally impious to say that evil has its origin from God; because the contrary cannot proceed from its contrary. Life does not engender death; darkness is not the origin of light; sickness is not the maker of health. In the changes of conditions there are transitions from one condition to the contrary; but in generation each being proceeds from its like, and from its contrary. If then evil is neither uncreated nor created by God, from whence comes its nature? Certainly that evil exists, no one living in the world will deny. What shall we say then? Evil is not a living animated essence; it is the condition of the soul opposed to virtue, developed in the careless on account of their falling away from good. Do not, then, go beyond yourself to seek for evil, and imagine that there is an original nature of wickedness. Each of us, let us acknowledge it, is the first author of his own vice.

But St. Basil continues,

> …reason asks, was darkness created with the world? Is it older than light?

He finally concludes that the **heaven** of the first day represents some kind of light and so,

> When, 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 the Spirit of God was borne upon the face of the waters." It is here in St. Basil that we first find the Holy Spirit compared to a bird covering her eggs and warming them with her body and he found this explanation in the work of “a Syrian” who remains unidentified. The main point to be made here is that “The Holy Spirit took an active part in the creation 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 order was itself an operation, and a state of things was brought into being,... And God called

> the light Day and the darkness He called Night. ... at that time it was not after the movement of the sun, but following the 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, and afterwards no more says day and night, but calls them both under the name of the more important; a custom you will find throughout Scripture. Everywhere the measure of time is counted by days, without mention of nights. … "The days of our years," says the Psalmist. "Few and evil have been the days of the years of my life," said Jacob, and elsewhere "all the days of my life." Thus under the form of history the law is laid down for what is to follow. ... God who made the nature of time measured it out and determined it by intervals of days; and, wishing to give it a week as a measure, he ordered the week to revolve from period to period upon itself, to count the movement of time, forming the week of one day revolving seven times upon itself: a proper circle begins and ends with itself. …

St. Basil discusses the alternate reading of one day for the first day in Genesis 1:5 and concludes that one day establishes a relationship with eternity which is proper for this first day of the world "whose character is to be one wholly separated and isolated from all the others."

3) In the third homily **On the Firmament**

> …we pass on to the wonders of the second day. And here I do not wish to speak of the narrator's talent, but of the grace of Scripture, for the narrative is so naturally told that it pleases and delights all the friends of truth. It is this charm of truth which the Psalmist expresses so emphatically when he says, "How sweet are thy words unto my taste, yea, sweeter than honey to my mouth." ... And God said, "Let there be a firmament in the midst of the waters, and let it divide the waters from the waters." ... Scripture might continue the history as it is begun: In the beginning God created heaven and earth. Afterwards He created light, then He created the firmament. But, by making God command and speak, the Scripture tacitly shows us Him to Whom this order and these words are addressed. It is not that it grudges us the knowledge of the truth, but that it may kindle our desire by showing us some trace and indication of the mystery. ... 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. How ridiculous 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, … 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. ... 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. 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 the higher regions? [Here St. Basil speculates that the upper and outer regions of the universe might be so stretched out as to be nearly flat, in this way, they contain the upper waters.] 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 all that is strong and unyielding. ... Here then, according to me, is a firm substance capable of retaining the fluid and unstable element water; ... 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.

St. Basil then continues with a discussion of the waters — a "superabundance of water" — that covered the earth at this time. And he speculates that such an amount of water was necessary to

balance the element of fire and prevent it from consuming the earth before the time.

> … However, a time will come, when all shall be consumed by fire; ... Reject then the foolish wisdom of this world, and receive with me the more simple but infallible doctrine of truth.

St. Basil believed, with others of his day, that the aether or deep space "is an ardent fire" and he explains the origin of rain and snow in the upper waters. But he is not ignorant of the true nature of the hydrologic cycle. He says

> When the exhalations from the earth, gathered together in the heights of the air, are condensed under the pressure of the wind, this aerial moisture diffuses itself in vaporous and light clouds; then mingling again, it forms drops which fall, dragged down by their own weight; and this is the origin of rain.

Similarly, for snow. As for the waters above the earth, he rejects the allegorical interpretation of these as evil spirits:

> Let us reject these theories as dreams and old women's tales. Let us understand that by water, water is meant; for the dividing of the waters by the firmament let us accept the reason which has been given us. ... Besides, the waters above the heavens, these waters privileged by the virtue which they possess in themselves, are not the only waters to celebrate the praises of God. "Praise the Lord from the earth, ye dragons and all deeps." (Ps. 148:7) Thus the singer of the Psalms does not reject the deeps which our inventors of allegories rank in the divisions of evil; he admits them to the universal choir of creation, and the deeps sing in their language a harmonious hymn to the glory of the Creator. And God saw that It was good. God does not judge of the beauty of His work by the charm of the eyes, and He does not form the same idea of beauty that we do. What He esteems beautiful is that which presents in its perfection all the fitness of art, and that which tends to the usefulness of its end. He, then, proposed to Himself a manifest design in His works, approved each one of them, as fulfilling its end in accordance with His creative purpose. ... May God. Who after having made such great things, put such weak words in my mouth, grant you the intelligence of His truth. so that you may raise yourselves from visible things to the invisible Being, and that the grandeur and beauty of creatures may give you a just idea of the Creator. For the visible things of Him from the creation of the world are clearly seen, and His power and divinity are eternal. (Cf. Rom. 1:20) Thus earth, air, sky, water, day, night, all visible things, remind us of who is our Benefactor. We shall not therefore, give occasion to sin and we shall not give place to the enemy within us, if, by unbroken recollection, we keep God ever dwelling in our hearts, to Whom be all glory and all adoration, now and for ever, world without end. Amen.

4) The fourth homily takes up the work of the third day and the gathering of the waters. This posed the problem to St. Basil of how to reconcile the earth as it appeared to him in the present (and as it appears to us now), divided into several continents, separated by the oceans, smaller seas, and numerous inland seas and lakes. It never seems to have occurred to him that the pre-Flood earth might have had an altogether different topography, and so, he solves the difficulty by explaining the nature of water to flow together into one place. But the most instructive and edifying parts of this homily for us today are those which extol the obedience of creatures to God's command and the fact that by this means His command —

> … God established and initiated natural laws. Thus, he invites us to stand around "the vast and varied workshop of divine creation". But as the pagans gathered into theatres to view impure sights, we, on the contrary are "carried back in mind to the times of old" to "view all the order of creation". Heaven, poised like a vault, earth, this immense mass which rests upon itself; the air, .. water, and the marvelous gathering together of it into the definite places which have been assigned to it: ... But what was its nature before this command made it take its course? You do not know yourself, and you have heard from no eyewitness. Think, in reality, that a word of God makes the nature, and that this order is for the creature a direction for its future course. There was only one creation of day and night. and since that moment they have incessantly succeeded each other and divided time into equal parts. Let the waters be gathered together. It was ordered that it should be the natural property of water to flow, and in obedience to this order, the waters are never weary in their course. … All this comes from that first command; it was for the waters a signal for their

> course. In all the story of waters, remember this first order ... Waters flow in virtue of God's order, and the sea is enclosed in limits according to this first law, ... This name of gathering does not mean any chance massing of water, but the greatest and most important one, wherein the element is shown collected together. ... that which separates the whole element from the rest. ... here it means the greatest of all, that gathering the extent of which equals that of the earth. ... The waters flowed into one place, and their different accumulations, ... received from the Lord the name of Seas. … And let the dry land appear. ... 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. ... **And God saw that It was good**. Scripture does not merely wish to say that a pleasing aspect of the sea presented itself to God. … It is not in this that Scripture makes God find the goodness and charm of the sea. Here it is the purpose of the work which makes the goodness. ... If the Ocean is good and worthy of praise before God, how much more beautiful is the assembly of a Church like this, where the voices of men, of children, and of women, arise in our prayers to God, mingling and resounding like the waves which beat upon the shore. This Church also enjoys a profound calm, and malicious spirits cannot trouble it with the breath of heresy. Deserve, then, the approbation of the Lord by remaining faithful to such good guidance, in our Lord Jesus Christ, to Whom be glory and power for ever and ever. Amen. (**St. Basil, pray for us!**)

5. The fifth homily continues with the work of the third day.

> It was deep wisdom that commanded the earth, when it rested after discharging the weight of the waters, first to bring forth grass, then wood, as we see it doing still at this time. For the voice that was then heard and this command were as a natural and permanent law for it; it gave fertility and the power to produce fruit for all ages to come: Let the earth bring forth.

It is in the exegesis of this part of Genesis One that many commentators, anxious to find some support in the Fathers for their evolutionary views, claim to have discovered it. But here is what I have found. St. Basil is struck with the development of plants and of this development, he says:

> The production of vegetables shows first germination. ... In fact, first comes germination, then verdure, then the growth of the plant, which after having attained its full growth, arrives at perfection in seed. ... Up to this point, the order in which plants shoot bears witness to their first arrangement. Every herb, every plant proceeds from a germ. ... God did not command the earth immediately to give forth seed and fruit, but to produce germs, to grow green, and to arrive at maturity in the seed; so that this first command teaches nature what she has to do in the course of ages.

Throughout the homily, then, St. Basil refers to the stages of natural generation as they still occur. And he also comments upon the phrase **after its kind**.

> 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

Nor is St. Basil unaware of mutations, diseases in plants. "But, they ask, is it true that the earth produces seed after its kind, when, often after having sown wheat, we gather black grain?" And St. Basil answers:

> This is not a change of kind, but an alteration, a disease of the grain. It has not ceased to be wheat; Thus, you find nothing in nature contrary to the divine command. As to the darnel 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; image of those who alter the doctrine of the Lord and, not being rightly instructed in the word, but, corrupted by the teaching of the evil one, mix themselves with the sound body of the Church to spread their pernicious errors secretly among purer souls.

As for the thorn of the roses St. Basil thinks that this was added later but he does not tell us how:

> But then the rose was without thorns; since then the thorn has been added to its beauty, to make us feel that sorrow is very near to pleasure, and to remind us of our sin, which condemned the earth to produce thorns and caltrops.

Earlier he has pointed out, however, that

> … instantly, with useful plants, appear noxious plants; with corn, hemlock; with the other nutritious plants, hellebore, monkshood, mandrake and the juice of the poppy. What then? Shall we show no gratitude for so many beneficial gifts, and reproach the Creator for those which may be harmful to our life? And shall we not reflect that all has not been created in view of the wants of our bellies?

For the immediate creation of harmful. poisonous substances, St. Basil finds justification in the principle, which he repeats several times, that "not a single thing has been created without reason, not a single thing is useless."

It would certainly seem, then, that even while he would not admit of any kind of evolution -- because of the command **after its kind**, -- still St. Basil thought that God merely planted the seeds of the plant kingdom on the third day and allowed them to germinate and grow to maturity subsequently. In other words, the question may here be raised: Did St. Basil or did he not, recognize what today we term the **principle of apparent age** or the principle of **creation as a fully mature product**? In answer, I will only quote some further statements of St. Basil that seem to me to show that he did, indeed, believe in this principle of apparent age and that his other statements on present generation only indicate his pre-occupation with the present order, especially in view of the fact that he is constantly drawing moral lessons therefrom.

> **Let the earth bring forth grass**. 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, … At this command every copse was thickly planted; all the trees, fir, cedar, cypress, pine, rose to their greatest height, the shrubs were straightway clothed with thick foliage ... **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. ... 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 revolutions, turning upon themselves when once fixed in their center; thus nature, receiving the impulse of this first command, follows without interruption the course of ages, until the consummation of all things. Let us all hasten to attain to it, full of fruit and of good works; and thus, planted in the house of the Lord, we shall flourish in the court of our God, in our Lord Jesus Christ, to whom be glory and power forever and ever. Amen.

Thus ends the fifth homily.

6) The sixth homily begins the discussion of the fourth day of creation: "The creation of luminous bodies." In the previous homily. St. Basil had pointed out that

> The reason why the adornment of the earth was before the sun is the following; that those who worship the sun, as the course 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.

Here he continues, after an introduction again comparing our contemplation of the prodigious wonders of creation with the pagan shows and games, and calling us to the higher.

> Heaven and earth were the first; after them was created light; the day had been distinguished from the night, then had appeared the firmament and the dry element. The water had been gathered into the reservoir assigned to it, the earth displayed its productions, it had caused many kinds of herbs to germinate, and it was adorned with all kinds of plants. However, the sun and the moon did not yet exist, in order that those who live in ignorance of God may not consider the sun as the origin of all that grows out of the earth. That is why there was a fourth day, and then God said: **Let there be lights In the firmament of heaven**.

We remark here that forgetfulness or rejection of the revelation of Creation has, indeed, led modern scientists into the error of considering the sun to be the origin of the earth itself, as in the big-bang theory, and the origin of life on earth, as energy from the sun is held to be necessary for chemical evolution up to the first cell. But according to St. Basil, we cannot separate science and religion or history and the truths of faith.

> When once you have learnt Who spoke, think immediately of the hearer. God said, "Let there be lights -- and God made two great lights." Who spoke? and Who made? Do you not see a double person? Everywhere, in mystic language, **history is sown with the dogmas of theology**.

With respect to the difficult question of the light of the first day of Creation in relation to the light of the sun, moon, and stars, here is what St. Basil says:

> Already light was created; why therefore say that the sun was created to give light? … Now there is nothing here contradictory to what has been said of light. Then the actual nature of light was produced: now the sun's body is constructed to be a vehicle for that original light. A lamp is not fire. Fire has the property of illuminating, and we have invented the lamp to light us in darkness. In the same way, the luminous bodies have been fashioned as a vehicle for that pure, clear, and immaterial light. The Apostle speaks to us of certain lights which shine in the world without being confounded with the true light of the world, the possession of which made the saints luminaries of the souls which they instructed and drew from the darkness of ignorance. This is why the Creator of all things made the sun in addition to that glorious light, and placed it shining in the heavens. And let no one suppose it to be a thing incredible that the brightness of the light is one thing, and the body which is its material vehicle is another. … And do not tell me that it is impossible to separate them. Even I do not pretend to be able to separate light from the body of the sun; but I maintain that which we separate in thought, may be separated in reality by the Creator of nature.

And the equally difficult question of the day and night before the fourth day:

> 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. … 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**.

This section contains a lengthy diatribe against that "vain", "imaginary" and "pretended" science of astrology. Here are some of the most pointed remarks on this popular topic:

> Those who overstep the borders, making the words of Scripture their apology for the art of casting nativities, pretend that our lives depend upon the motion of the heavenly bodies, and that thus the Chaldeans read in the planets that which will happen to us. By these very simple words **let them be for signs**, they understand neither the variations of the weather, nor the change of seasons; they only see in them, at the will of their imagination, the distribution of human destinies...."

St. Basil then shows that so many circumstances can intervene to prevent an accurate computation of the moment of a person's nativity that it is "supremely ridiculous" to listen "open-mouthed" to the forecasts of these astrologers. Since accuracy is more likely today, here are the deeper reasons for refusing to deal in horoscopes.

> Even our acts, where each one feels his will ruling, as in the practice of virtue and vice, depend, according to them, on the influence of celestial bodies. … Now, in the hour of birth, it is very important whether one is looked upon by a beneficent star or by an evil one, to speak their language. … What madness! But above all, what impiety! For the evil stars throw the blame of their

> wickedness upon Him Who made them. If evil is inherent in their nature, the Creator is the author of evil. If they make it themselves, they are animals endowed with the power of choice, whose acts will be free and voluntary. Is it not the height of folly to tell these lies about beings without souls? Again, what a want of sense does it not show to distribute good and evil without regard to personal merit; to say that a star is beneficent because it occupies a certain place; that it becomes evil because evil is viewed by another star; and that if it moves ever so little from this figure it loses its malign influence. … If the origin of our virtues and of our vices is not in ourselves, but is the fatal consequence of our birth, it is useless for legislators to prescribe for us what we ought to do, and what we ought to avoid; it is useless for judges to honour virtue and to punish vice. The guilt is not in the robber, not in the assassin: it was willed for him; it was impossible for him to hold back his hand, urged to evil by inevitable necessity. … As for us Christians, we shall see our great hopes vanish, since from the moment that man does not act with freedom, there is neither reward for justice, nor punishment for sin. Under the reign of necessity and of fatality, there is no place for merit, the first condition of all righteous judgment. But let us stop. You who are sound in yourselves have no need to hear more,...

St. Basil then continues with his discussion of the **signs** and **times**, the **days** and **years** which the sun and moon are to mark. The signs to which Scripture refers are, he has said, the signs of the weather. The times are the seasons. Then,

> **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. (Ps. 136:8, 9)

Finally, St. Basil discourses at length upon the greatness of the sun and the moon, and upon the waxing and waning of the moon as a symbol of our fickle and unstable human nature. He writes eloquently of the influence of the moon on the tides, speaking of her "respiration and then, by her expiration" urging the tides to and from their boundaries. Finally, there is a sentence which I would like to inscribe in gold on the doors of our schools and seminaries. St. Basil says

> **I have entered into these details, to show you the grandeur of our luminaries and to make you see that, <u>in the Inspired words</u>, <u>there Ii not one idle syllable</u>.**

7) With his seventh homily, St. Basil begins his discussion of the work of the 5th day, which occupies the 7th and 8th homilies, but only because he forgot the birds in his lengthy description of marine life. As for the evolutionary desire to see the waters bring forth not only marine life but all life, it cannot be, even for marine life. Here is what St. Basil says.

> After the creation of the luminaries the waters are now filled with living beings and its own adornment is given to this part of the world. Earth had received hers from her own plants, the heavens had received the flowers of the stars, and, like two eyes, the great luminaries beautified them in concert. It still remained for the waters to receive their adornment. 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. Everywhere from its ebullition frogs, gnats and flies came forth. For that which we see today is the sign of the past. Thus everywhere the water hastened to obey the Creator's command. Who could count the species which the great and ineffable power of God caused to be suddenly seen living and moving, when this command had empowered the waters to bring forth life? Let the waters bring forth moving creatures that have life. Then for the first time is made a being with life and feeling. For though plants and trees be said to live, seeing that they share the power of being nourished and growing; nevertheless they are neither living beings nor have they life. To create these last God said, "**Let the water produce moving creatures**."

There are several points worthy of note here. First of all, St. Basil seems to place no interval of time between God's word of command and the appearance of creatures in the waters, living and swimming. Secondly, he seems to impute some power to the water itself, given it by God, to bring these marine creatures forth. Perhaps it is similar to the fertility of the soil when the earth is said to

produce plant life. Perhaps it is more. But according to Fr. W. J. McGarry, S.J., Ph.D., writing in Thought ("St. Basil and Evolution," vol. 9 (3) Dec. 1934, pp. 399-412)

> Whatever the power implanted, it is inoperative until the (divine) command comes. Earth, therefore, and water, if left to their natural powers, would not bring forth the forms of life. …This suddenness of activation is not the mark of a natural potentiality; it is the instantaneity of the obediential potentiality. (p. 410-411)

Karl Rahner tries to make of this obediential potentiality the mechanism of evolution. But he lacks the divine command. For this divine command at Whose order the earth and the water "bring forth" is given only on the days of Creation Week — it is not, according to Holy Scripture, delegated to evolutionary time. Thirdly, we might note that St. Basil places the creation of insects on the same day if not along with the creation of marine life. And finally, it is very interesting to see that St. Basil here formulates, long before James Hutton and Charles Lyell in the late 18th and early 19th centuries, the principle of uniformitarianism. Hutton had said: "The present is the key to the past." St. Basil says:

> That which we see today is the sign of the past.

It certainly is a valid principle as long as it allows for disruptions in natural processes such as the catastrophes that Holy Scripture describes and predicts and even more importantly, as long as it does not confuse the **creative acts** of God with **natural processes**.

St. Basil is certainly not in the least guilty of this latter confusion but evolutionists make it -- insist upon it -- constantly. Also, St. Basil believed in the world-wide Deluge of Noah's time but he was not aware of the evidence of the fossils. He knew of amber, which is fossilized resin of pine, but he speaks of it as "the crystallized sap of plants." He obviously makes no connection between the "little insects which have been caught in the sap while still liquid and imprisoned there" and any kind of catastrophe -- at least not in a discernible manner. (See 5th homily).

St. Basil devotes a great part of this 7th homily to comparing the behavior of men with that of various marine creatures; noting that many fish devour one another "and the smaller is food for the larger," he says:

> And we mortals, do we act otherwise when we oppress our inferiors?

But from another point of view,

> A fish does not resist God's law, and we men cannot endure His precepts of salvation!

He even digresses to the point of 'Husbands love your wives" (Eph. 5:25) comparing adulterous husbands to the viper who unites with the lamprey:

> The union of the viper and the lamprey is an adulterous violation of nature. On the other hand, wives whose husbands resemble the viper should submit to them even as the lamprey obeys the hiss of the poisonous reptile: "However hard, however fierce a husband may be, the wife ought to bear with him, and not wish to find any pretext for breaking the union. He strikes you, but he is your husband. He is a drunkard, but he is united to you by nature. He is brutal and cross, but he is henceforth one of your members, and the most precious of all.

Obviously, the Fathers of the Church expected wives to become saints -- not liberated divorcees. And you can see from these examples that the Fathers used the homilies on Genesis as opportunities to preach on a number of related -- and perhaps not so related -- subjects.

8) The eighth homily before he remembers the birds, contains some important points. "The command of God advanced step by step and earth thus received her adornment." The acts of God that produce creatures thus proceed in a successive, additive way and not in a developmental, much less evolutionary way. And addressing the errors of the Manichaeans, St. Basil says:

> 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. It is the word of

> God which forms the nature of things created. "Let the earth bring forth"; that is to say, not that she may bring forth that which she has but that she may acquire that which she lacks, when God gives her the power.

I think it may be said that this much disputed phrase of Genesis One — Let the earth bring forth — and the later: Let the waters swarm — both refer to the **nutritive** and **sustaining** powers of earth and waters that we observe operating today.

A more striking view of St. Basil is that marine life is inferior to that of land animals.

> We conclude that, by their nature, swimming creatures appear only to have an imperfect life, because they live in the thick element of water. … Thus divine language appears to indicate that, in aquatic animals, the carnal life originates their psychic movements, whilst in terrestrial animals, gifted with a more perfect life, the soul enjoys supreme authority. … It seems therefore, that God after the command to the waters to bring forth moving creatures that have life, created simply living bodies for aquatic animals, whilst for terrestrial animals He commanded the soul to exist and to direct the body, showing thus that the inhabitants of the earth are gifted with greater vital force.

He hastens to add, however, that the animal soul is not the rational, reasonable soul of man despite the many characteristics of animals, particularly in the area of feeling and emotion, that resemble those of man.

Another very interesting point made by St. Basil is the connection of the **soul** with **blood**.

> Hear now about the soul of creatures devoid of reason. Since, according to Scripture, "the life of every creature is in the blood," (Lev. 17:11) as the blood when thickened changes into flesh, and flesh when corrupted decomposes into earth, so the soul of beasts is naturally an earthy substance.

Then, in the midst of a discourse against the foolish belief in transmigration of souls, St. Basil notices some people in his audience making signs to him to remind him that he has passed over, forgotten, a part of creation. And so,

> That which we have omitted is not to be despised. It is the third part of the animal creation, if indeed there are three kinds of animals, land, winged and water. Let the waters, it is said, bring forth … **fowl that may fly above the earth**... Why do the waters give birth also to birds? Because there is. so to say, a family link between the creatures that fly and those that swim. In the same way that fish cut the waters, using their fins to carry them forward and their tails to direct their movements round and round and straightforward, so we see birds float in the air by the help of their wings.

In other words, it is not a question at all of birds developing, much less evolving from some ancient or common ancestor in the sea. St. Basil would have been astounded at such an interpretation of the Sacred Text. No. It is the similarity of environments that underlies the placing of birds and marine creatures on the same day of creation. Furthermore, some translations of this Scripture clarify the entire verse. Thus, the **Jerusalem** Bible:

> Let the waters teem with living creatures, and let birds fly above the earth within the vault of heaven

and the **Amplified** Bible:

> Let the waters bring forth abundantly and swarm with living creatures, and let birds fly over the earth in the open expanse of the heavens.

The basic sense thus seems to be of abundant, teeming life immediately and directly produced in both the waters and in the skies. But St. Basil discourses at length upon the different kinds of birds and insects — for he considers all flying creatures, including bats, among the flying creatures of this verse — drawing all sorts of moral lessons from their characteristics. Thus,

> …the cock is proud; the peacock is vain of his beauty; doves and fowls are amorous, always seeking each other's society. The partridge is deceitful and jealous, lending perfidious help to the huntsmen to seize their prey.

And what a wealth of knowledge he has of the bees! “See how the discoveries of geometry are mere by-works of the wise bee!” He even knew about parthenogenesis, for according to the natural science of his day, the vultures brought forth their young without any normal mating. From this kind of phenomenon, St. Basil reminds anyone who would mock Christians for believing in the miraculous conception of Our Lord that God Himself has allowed nature to give us a thousand reasons for believing in the marvelous.

Discoursing further upon the birds flying in the air above the earth, St. Basil distinguishes between the air of earth’s atmosphere and the aether, holding the former to be more dense, thicker than the more refined aether. (And so it is!) And so he comes to another summation:

> You have then heaven adorned, earth beautified, the sea peopled with its own creatures, the air filled with birds which scour it in every direction. Studious listeners, think of all these creations which God has drawn out of nothing. ...

Here again, is another of those passages which can be singled out as an indication of belief, on Basil’s part, in the strictly literal successive, day by day, real creation — ***ex nihilo*** — of each of the first creatures of the universe. And in another place (Hom. 7.2.) he will say that “God caused to be born the firstlings of each species to serve as seeds for nature.” I think we find such apparent -- or real -- inconsistencies mainly because St. Basil was not confronted with the same errors that we are today. Where he is especially clear and emphatic — as he is against transmigration of souls, for example (Horn. 8.2.) — it is because these errors were prominent in his time. For the most part, though, he gives himself to extolling the wisdom of God, the Creator, and exhorting all to glorify and praise Him for His Wisdom and power. Thus, “Recognize everywhere the wisdom of God; never cease to wonder, and, through every creature, to glorify the Creator.” And to the evolutionists of our time, we might also say:

> Have not those who give themselves up to vain science the eyes of owls? The sight of the owl, piercing during the night time, is dazzled by the splendor of the sun; thus the intelligence of these men, so keen to contemplate vanities, is blind in presence of the true light.

In the 7th Homily (2) St. Basil had seen “frogs, gnats and flies” come forth from the watery mud (an allusion to the ancient belief in spontaneous generation) and indicated that he was classifying insects with the flying creatures of the 5th day’s creations. Here again, in the 8th Homily (section 7) he discourses more at length on bees, wasps, and all flying creatures that breathe through their pores. And so,

> Our God has created nothing unnecessarily and has omitted nothing that is necessary. … May He who has filled all with the works of His creation and has left everywhere visible memorials of His wonders, fill your hearts with all spiritual joys in Jesus Christ, Our Lord, to whom belong glory and power, world without end. Amen.

9) The 9th homily contains St. Basil's defense of his method of expounding Scripture, and it is so timely for us today, that I will quote at length.

> I know the laws of allegory, though less by myself than from the works of others. There are those truly, who do not admit **the common sense of the Scriptures**, for whom water is not water, but some other nature, who see in a plant, in a fish, what their fancy wishes, who change the nature of reptiles and of wild beasts to suit their allegories, like the interpreters of dreams who explain visions in sleep to make them serve their own ends. For me grass is grass; plant, fish, wild beast, domestic animal, **I take all In the literal sense**.

And may we add — **day**? St. Basil continues:

> For I am not ashamed of the gospel. (Rom. 1:16). Those who have written about the nature of the universe have discussed at length the shape of the earth. If it be spherical or cylindrical, if it resemble a disc and is equally rounded in all parts, or if it has the form of a winnowing basket and is hollow in the middle; all those conjectures have been suggested by cosmographers, each one

> upsetting that of his predecessor. It will not lead me to give less importance to the creation of the universe, that the servant of God, Moses, is silent as to shapes; he has not said that the earth is a hundred and eighty thousand furlongs in circumference; he has not measured into what extent of air its shadow projects itself whilst the sun revolves around it, nor stated how this shadow, casting itself upon the moon, produces eclipses. He has passed over in silence, as useless, all that is unimportant for us. Shall I then prefer foolish wisdom to the oracles of the Holy Spirit? Shall I not rather exalt Him who, not wishing to fill our minds with these vanities, has regulated all the economy of Scripture in view of the edification and the making perfect of our souls? It is this which those seem to me not to have understood, who, giving themselves up to the distorted meaning of allegory, have undertaken to give a majesty of their own invention to Scripture. It is to believe themselves wiser than the Holy Spirit, and to bring forth their own ideas under a pretext of exegesis. **Let us hear Scripture as It has been written**.

The key to St. Basil's thought is certainly in that last sentence.

Also, I feel constrained to interpolate a word or two upon the attitude of this great Saint about those things which Moses does not tell us. If all that Moses is silent about is unimportant for our eternal salvation, then surely we may infer the inverse that all that Moses does say is very important, and for our eternal salvation. Thus, those modern exegetes and Biblical commentators who would expunge from Genesis all meanings that presume to instruct us about nature, geography and early history — these people cannot claim St. Basil as their champion. For even as can be seen from this summation of his thought, he discourses at length upon subjects of natural science, geography and history. And furthermore, so far, so very far is he from their dismissal of Genesis One as poetry, as figure, as anything resembling myth, that he asserts, with emphasis: Let us hear Scripture as It has been written. And how many wilt say — Amen?

This final homily also contains the finest passages upon the "progress of nature through the ages.' Thus,

> Behold the word of God pervading creation, beginning even then the efficacy which is seen displayed today, and will be displayed to the end of the world! 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. Animals do not see their peculiarities destroyed or effaced by any length of time; their nature, as though it had been just constituted, follows the course of ages, for ever young. Let the earth bring forth the living creature. This command has continued and earth does not cease to obey the Creator. For, if there are creatures which are successively produced by their predecessors, there are others that even today we see born from the earth itself. In wet weather she brings forth grasshoppers and an immense number of insects which fly in the air and have no names because they are so small; she also produces mice and frogs. In the environs of Thebes in Egypt, after abundant rain in hot weather, the country is covered with field mice. We see mud alone produce eels; they do not proceed from an egg, nor in any other manner; it is the earth alone which gives them birth. Let the earth produce a living creature.

Now today, our scientific theists would laugh at St. Basil for his naive beliefs in this kind of spontaneous generation, for of course, everyone knows that Redi and Pasteur proved conclusively, experimentally, that living organisms do not and can not proceed from inorganic matter. And yet, this discarded theory of spontaneous generation is, even in our most enlightened era, enjoying a surreptitious revival. By scientific magic, by evolutionary sleight-of-hand, spontaneous generation most certainly happened on the primeval earth in the primordial seas. The National Geographic for September 1976 (vol. 150, no. 3) gives you a spectacular, full-color representation of just this sorcery, this spontaneous generation of life from — not nothing — but from methane, hydrogen, water vapor, ammonia, nitrogen, carbon monoxide and electricity. "Life takes hold on an infant

planet!" The reducing atmosphere of primitive earth. These are the new concepts but it is the same old spontaneous generation. It differs from that of St. Basil in one very important respect, though. St. Basil starts with a created, fully mature and very fertile earth. St. Basil begins with a product. A God-created. God-given and God-sustained product. The Miller's, the Urey's, the Oparin's, and the Sidney Fox's of today make it a billion times harder for themselves starting, as they do, with this reduced, uninhabited and radically uninhabitable earth. Undaunted, though, they proceed even though "The odds against the right molecules being in the right place at the right time are staggering." (p. 390). Well, as Dr. Harold Slusher would undoubtedly say at this point, "He who laughs last laughs best!" And I suspect that St. Basil will — easily — have the last laugh.

Another thought occurred to me while reading this final homily of St. Basil's *hexaemeron*. He emphasizes the instinct of animal behavior in such a way that you know the evolutionist's emphasis upon adaptation is suspect. For example, and not to go into it all too extensively here, adaptation is defined as the adjustment of a plant or animal to a certain environment for purposes of survival. The connotations are all forward-looking, as if the animal got itself into a certain habitat, found some conditions very unfavorable, and proceeded to make the necessary adjustments. Now this does happen to a degree: when the weather becomes too hot, bees will cool the hive by beating their wings; many animals adjust by migrating to a more suitable climate for a time; and others possess the remarkable mechanisms that enable them to hibernate. But none of these behaviors are such that an animal could change its nature. Rather the contrary. They seem equipped — beforehand — for just this purpose: to retain their nature and to continue to operate according to it. Thus, one creation textbook quotes an authority on the subject as saying:

> No plants or animals are non-adapted and then become adapted, because only those that happen to be already adapted can survive. (Harold W. Clark, *Wonders of Creation*. Omaha: Pacific Press, 1964, p. 66.)

It is adaptation in this sense that St. Basil emphasizes.

> The little dog has as yet no teeth, nevertheless he defends himself with his mouth against anyone who teases him. The calf has as yet no horns, nevertheless he already knows where his weapons will grow. [I have often seen calves lower their heads in a threatening attitude — long before they have any horns!] Here we have evident proof that **the instinct of animals is innate**, and that in all beings there is nothing disorderly, nothing unforeseen. [Animals, for example, do not learn as human beings do. They are programmed from the start. And the limitations to what any animal can learn with training, are quite restricted, even in horses, dogs — and chimps] All bear the marks of the wisdom of the Creator, and show that they have come to life with the means of assuring their preservation.
>
> "The dog is not gifted with a share of reason; but with his instinct has the power of reason. ... in nature all has been foreseen, all is the object of continual care. If you examine the members even of animals, you will find that the Creator has given them nothing superfluous, that He has omitted nothing that is necessary.

The recent discoveries of the real purposes of the supposedly vestigial organs is proof of what St. Basil says here — nothing is really superfluous or useless, though we may not know its purpose. St. Basil discusses somewhat at length the answer to the question "Why has the elephant a trunk?"

> The reason is because he has no neck and he has no neck because he is so huge that a neck would throw his whole body out of proportion. His legs are like "united columns" and in countries which use elephants in their cavalry, they march "at the head of the phalanx, like living towers." … Thus we are right in saying that it is impossible to find anything superfluous or wanting in creation. Well! God has subdued this monstrous animal to us to such a point that he understands the lessons and endures the blows we give him; a manifest proof that the Creator has submitted all to our rule, because we have been made in His image.

Then St. Basil returns to the subject of the venemous animals.

> I am not more astonished at the size of the elephant, than at the mouse, who is feared by the elephant, or at the scorpion's delicate sting, which has been hollowed like a pipe by the supreme artificer to throw venom into the wounds it makes. And let nobody accuse the Creator of having produced venemous animals, destroyers and enemies of our life. Else let them consider it a crime in the schoolmaster when he disciplines the restlessness of youth by the use of the rod and whip to maintain order.

It simply did not occur to St. Basil, apparently, that this analogy would not apply until after the Fall and God's curse on mankind and on nature because of mankind. He allows for the thorn of the rose to be added later because Scripture explicitly mentions "thorns and thistles" (Gen. 3:18) but does not seem at all to consider anything else in nature to be expressly due to the sin of Adam. Rather, he ends with this provocative exhortation:

> With faith thou hast the power to walk upon serpents and scorpions. Do you not see that the viper which attached itself to the hand of Paul, whilst he gathered sticks, did not injure him, because it found the saint full of faith? If you have not faith, do not fear beasts so much as your faithlessness, which renders you susceptible of all corruption.

Finally, at the end of this 9th homily, St. Basil comes to the creation of man and treats it very summarily, with only a fraction of the space he has given to the rest of creation. This was undoubtedly due to circumstances surrounding the homilies of the *hexaemeron* which were delivered during Lent for a set number of morning and evening services. St. Basil spoke extempore and thus frequently overshot the time allotted for each of the days of creation. And what he says of man's creation would not sit well with most people today for he takes this occasion to inveigh against the Jews for failing to recognize that it is the Messiah, the Second Person of the Blessed Trinity Himself Who is revealed in the words "Let us make man .. ." From the error of the Jews, he is led to opportunities of landing blows against the Arians:

> Hear also, you who belong to the new concision, and who, under the appearance of Christianity. strengthen the error of the Jews. To Whom does He says, "in our image," to whom, if not to Him who is "the brightness of His glory and the express image of His Person," (Heb. 1:3) "the image of the invisible God"? (Col. 1:15). After having enlightened the Jew, Scripture dissipates the error of the Gentiles in putting itself under the shelter of unity, to make you understand that the Son is with the Father, and guarding you from the danger of polytheism. He created him in the image of God. ... If there is one image, from whence comes the intolerable blasphemy of pretending that the Son is unlike the Father? What ingratitude! You have yourself received this likeness and you refuse it to your Benefactor! You pretend to keep personally that which is in you a gift of grace, and you do not wish that the Son should keep His natural likeness to Him who begat Him. ... May the Anomoean be confounded, the Jew covered with shame, the faithful exultant in the dogmas of truth, and the Lord glorified, the Lord to Whom be glory and power, world without end. Amen.

Thus ends the *hexaemeron* of St. Basil, the great Cappadocian Father, Bishop of Caesarea in Asia Minor and "Father of the religious life" (See Fr. Donald Wuerl, *Fathers of the Church*, OSV Press, 1975, p. 73).

The Medieval Background

In the 13th century, there was a plethora of treatises on the *Hexaemeron*, so that it is difficult to ascertain what is original in St. Thomas' work and what is merely borrowed. This appendix surveys the main lines of development of medieval exegesis of Genesis, concentrating on the periods preceding and contemporary with St. Thomas' writing. The plan is first to sketch the general background, then to describe the encyclopedic works of Vincent of Beauvais and of Albert the Great; after this is an exposition of the *Sentences* of Peter Lombard. followed by an account of the commentaries on the *Sentence*, by Bonaventure and Albert the Great; in conclusion, there is an

outline of Arab and Jewish Neoplatonic influences on St. Thomas' thought.

General Background

One of the earlier sources read by St. Thomas was the *De Rerum Natura* of St. Bede (753). Bede's treatise bears the same title as, and borrows heavily from, a work composed by St. Isidore of Seville (636). Yet Bede possessed more precise and detailed scientific information than Isidore, exhibiting a knowledge of the eccentric orbits of planets, their apogees and perigees and variations in their speeds — information which he acknowledges having attained from the *Historia Naturalis* of Pliny. Bede speaks of an aqueous heaven beyond that of the firmament, and a highest heaven beyond the aqueous heaven that is the habitation of pure spirits. He also accepts the teachings on the elements deriving from Aristotle and transmitted to him through the Church Fathers. In his *Hexaemeron* Bede proposes a successive creation and a long interval between the production and the organization of matter. (*Hexaemeron* I, I. PL 91, 1839).

In his *Hexaemeron* St. Thomas attributes the *Glossa Ordinaria* on the Scriptures to 'Strabo', i.e. Walafridus Strabo (849), a pupil of Rabanus Maurus. Actually, the *Gloss* was composed by Anselm of Laon (1117), but it bears traces of the work of Strabo and his students. Like other glosses, it presented with each verse of the Bible a collection of brief commentaries taken from the Fathers of the Church and from Isidore, Bede and Alcuin; to these the author occasionally added his own thoughts. Thus, in commenting on the six days of creation, the *Gloss* mentions that the word 'heaven', which occurs in the first verse of Genesis, does not refer to the visible firmament but to the empyrean heaven, i.e. a fiery or intellectual heaven. This was so named, the author explains, not because of its heat but because of its splendour; as soon as it was created it was filled with angels. This text provoked considerable speculation about the eympyrean heaven, which came to be regarded as completely immobile and as the dwelling place of the blessed.

Somewhat along the same lines as the *Gloss* is the exegetical work of the School of St. Victor, particularly as found in Hugh of St. Victor's (1141) *Annotationes elucidoreae in Pentateuchum* and *De sacramentis christianae fidei*, which bear considerable affinity to the works of St. Bede and generally favour the Scriptural interpretations of the Cappadocian Fathers.

Encyclopedic Works

The writings of Cassiodorus (570), Isidore, Bede, and Rabanus Maurus represented several centuries of encyclopedic activity that attempted to preserve the knowledge that had come to the West from antiquity. **Such encyclopedic accounts generally organized their scientific knowledge around the work of the six days**. The culmination of this tradition may be seen in the *Speculum* of the Dominican Vincent of Beauvais (1149-1265), composed around 1240, when the young St. Thomas had just entered the Order of Preachers. An indication of its contents may show, by contrast, the elements of originality in St. Thomas' analysis.

In the *Speculum* Vincent states that he composed his work with much labour and in response to the demands of his Dominican brethren. Of its four parts, only the first, which is devoted to physics (*Speculum Natural*), relates to the *Hexaemeron*. Vincent orders his materials as follows: The first book takes up the original creation of the world; the second, the material universe and the work of the first day; the third, the work of the second day, the firmament and the various heavens; and so on. Within this framework, the text of Genesis is used only to provide convenient compartments for compiling scientific information. Thus, for example, the separation of the dry lands from the waters on the third day opens up a treatise on geology and mineralogy that comprises no less than 95

chapters. The creation of plants, in its turn, is a treatise of 156 chapters on botany. All of this knowledge, much of it excerpted from such authors as Pliny and Isidore of Seville, is presented without any critical sense and without any attempt at consistency of exposition.

A departure from this mode of transmitting scientific knowledge took place in the 13th century with the writings of St. Albert the Great. He too set himself to the task of composing an encyclopedic treatise, but this time based on the scientific writings of Aristotle. Rather than compose a literal commentary, as St. Thomas was later to do, or even present a paraphrase, Albert took considerable liberty with the text and introduced many digressions, although he followed the logical order of Aristotle. The statement with which St. Albert opens this monumental exposition is worth citing, particularly when one considers that St. Thomas was his student at the time of its composition; Albert's work thus supplies a contemporary summary of the scientific education that Thomas received.

> In the science of nature it is our intention to meet the demands of the friars of our order as well as we can. For several years now they have been asking us to compose a book of physics wherein they might find physical science in its entirety, so that, with its aid, they may have a satisfactory understanding of Aristotle's treatises ... This is the method we will adopt in this work: we will follow the order and the views of Aristotle; we will give everything that seems to us necessary for explaining and proving these views; but we will make no mention of the text of Aristotle. Moreover, we will make several digressions of our own to clarify the doubts that will arise and to fill out those elements that, having been insufficiently treated, introduce obscurities in Aristotle's teaching. ... Proceeding in this manner we will compose the same number of books as Aristotle did, and under the same titles. Here and there we will add parts to the books that have come to us incomplete; also, occasionally we will add books that were set aside or omitted, that Aristotle never composed or, if he did compose them, have not come down to us.

Apart from Albert's exhaustive treatment of the Aristotelean corpus, he gives extensive treatment to the *Hexaemeron* in his commentary on the *Sentences* and in his theological *Summa*. In these places he recounts the patristic and early medieval tradition, with all the questions and solutions of difficulties that were customarily treated.

Peter Lombard's *Sentences*

The medieval writer who probably exerted the greatest influence on St. Thomas' account of creation was Peter Lombard, the *Master of the Sentences*. This work, composed toward the middle of the 12th century, served as a text for all the masters at the University of Paris, including St. Thomas, who gave his first exposition of the six days in his commentary on the *Sentences*.

Four distinctions (12-15) within the second book of the *Sentences* are devoted to the work of corporeal creation; in addition, there is a lengthy discourse on man's origin, his temptation and fall, etc. (dd. 17-44). The extensive treatment of man in the *Sentences* affected the structure of later accounts; thus St. Thomas. in his *Summa*, devotes twenty-eight *Questions* to man, whereas he treats all of corporeal creation in ten.

Peter Lombard introduces his treatment of the *Hexaemeron* in the second book with the words, 'It remains for us now to elucidate a certain number of points on the subject of the creation of other things, and in particular on the distinctions of the work of the six days.' The creatures referred to as 'other things' were the angels, studied in the preceding distinctions (2-11). The line of development in the *Sentences* is from creation in general to spiritual creatures, to material creatures and finally to men, creatures composed of matter and spirit; this order is followed exactly in St. Thomas' *Summa*.

The four distinctions devoted to corporeal creation are divided as follows: d. 12 takes up the work of creation itself, which for the author is before the six days; d. 13 is devoted to the work of

the first day; d. 14 to the works of the second, third and fourth days; and d. 15 to the works of the fifth and sixth days, a summary of all seven days together, and God's resting on the seventh day. The internal logic of the treatment is not so clear as is that of St. Thomas, but Peter Lombard is following the classical division made by the Fathers, *viz,* treating first the work of creation (*opus creationis*). then the work of formation and of distinction (*opus distinctionis*), corresponding to the first three days; and finally the work of ornamenting the various parts of the universe (*opus ornatus),* corresponding to the last three days.

The author insists that there is but one principle for all things, even though he is aware that philosophers such as Plato and Aristotle had thought that the world has several principles, that the matter composing it was uncreated and eternal, and that God was not the creator of matter but only its organizer. Against their teaching Catholic doctrine maintains that God, the unique principle of all, created everything from nothing: 'everything' includes both heaven and earth, things invisible and visible. Peter Lombard then goes on to discuss the details in the light of the teachings of the Fathers. To St. Augustine he attributes the doctrine of simultaneous creation, and to the 'other Fathers' (Gregory. Jerome and Bede are mentioned) that of a primordial creation of a primary and unformed matter, made up of a mixture of the four elements, followed by the formation in intervals of six real days of all other bodies in their various species. Without explicitly rejecting St.

Augustine, the author indicates his preference for the second interpretation as being more consonant with the literal sense of Genesis.

(Please note that from this paragraph onwards, Fr. Wm. Wallace speaks of two positions on the interpretation of Genesis One. At the close of this summary, I will propose a third based on St. Basil, and then a **fourth,** also drawn from St. Basil.)

Peter Lombard also held that it was necessary for light to be created on the first day so that the things created on succeeding days might be seen, although he conceded that one might interpret the creation of light in either a material or a spiritual way. Other portions of his account that were taken up by St. Thomas include his view that animals did not become harmful to man until after the fall, and that organisms arising through spontaneous generation were not created at the beginning, except virtually, within the materials from which they were later to take their origin.

Commentaries on the *Sentences*

St. Bonaventure, less an innovator than St. Albert the Great, has an extensive treatment of the six days in his commentary on the *Sentences*. In discussing the two traditions proposed by Lombard, Bonaventure clearly favours the doctors opposed to St. Augustine. The basis for this decision is found in a text that reveals the difference between Bonaventure's mentality and that of Albert and Thomas.

> Certain of the Fathers, in this matter, have followed mainly the theological way, subordinating reason to the data of faith. Others, among whom St. Augustine is the most reputable, have mainly followed a philosophical way, which adopts what seems to be more conformable to reason. ... Thus, since it appears more reasonable for all things to be produced at once by the sovereign power, and since intervals interposed seem to serve neither utility nor necessity, Augustine has affirmed that everything was produced simultaneously, confirming his position by the authority of Holy Scripture.
>
> However, since the sense of Scripture seems to be strained into supporting this position, and since it is safer and more meritorious to subordinate our intelligence and our reason entirely to Scripture than to put a strain upon it in any way, the other doctors … have understood and affirmed those things **just as the text and the letter of Genesis appears to state them**. For this reason they have maintained that all corporeal things were created all at once in their matter (*In materia*), but that they were not simultaneously differentiated in form (*In forma*), this being done in the six days.

> Although this opinion seems less appealing to reason than the other, it is not at all against reason to subscribe to it. **Although reason, when relying on its own acumen, does not grasp the soundness of this position, it does when submissive to the light of faith.**

This attitude towards the relationships between faith and reason, it may be remarked, accents by contrast the more intellectual orientation found in the writings of St. Albert and St. Thomas. [But only, may I suggest, because both Albert and Thomas would have protested that reason, if truly reasonable, supports Scripture and is not in contrast with it. I think they would agree that St. Augustine's interpretation does put a strain upon Genesis. Ph]

St. Albert also attributes the teaching of **simultaneous creation** to St. Augustine, and that of **successive production through the six days** to the greater number of the Fathers, among whom he names Gregory, Jerome, Basil, Ambrose, Denis, John Damascene, Alcuin and Strabo. His conclusion, however, is that 'nothing appears to me to be more true than what St. Augustine says.'

Again, in his *Summa Theologica*, while declaring that **both views are surely Catholic**, he indicates his preference for St. Augustine's explanation. The creative word of God could not be other than instantaneous, in Albert's understanding, but the revelation of that instantaneous work could only be made according to a temporal succession.

A remark by Albert that has been much quoted is found in his discussion of the nature of light, which Peter Lombard had regarded as a luminous cloud, while Aristotle had held that it was a form found in bodies. St. Albert clearly indicates his preference, in such matters, for a scientific authority, 'In matters of faith and morals, one should follow St. Augustine more than any philosopher, if these are in disagreement. But if one is concerned with medicine, I would rather go to Galen or to Hippocrates, and, if it is a question of the nature of things, to Aristotle or to someone else who is expert in this field.' [One must remember that Fr. Wm. Wallace is a theistic evolutionist and while I am not yet able to check his sources at first hand, I doubt very seriously that St. Albert would ever prefer a secular author of whatever authority — even Aristotle — if it were a question of the Holy Scriptures being contradicted or called into question in any way. And this is precisely the situation we are confronted with in the Church today — not with any disparagement of honest, truly open-minded medical, philosophical, or other scientific expertise. Ph]

Neoplatonic Influences

A final important source of St. Thomas' teaching was Neoplatonism, which derived ultimately from Plato and Aristotle and came to the 13th century through the writings of Arabian and Jewish philosophers. St. Thomas was acquainted with the so-called *Theologia Aristotelis*; its content was borrowed mainly from the 4th to the 6th books of Plotinus' *Enneads*, and the *Liber de Causis*, a treatise excerpted largely from the *Elementatio Theologica* of Proclus. Another important source was the *De Divinis Nominibus* of Denis, the pseudo-Areopagite, whose writings had been transmitted to the scholastics in the translation and commentary of John Scotus Erigena (9th century). Erigena himself, while principally inspired by Denis, took account of the various writings on the *Hexaemeron* by St. Basil and St. Gregory of Nyssa (whom he identified with St. Gregory Nazianzen), and the scientific writings of Pliny, Ptolemy and Martianus Capella. Through Erigena also came some detailed teachings of Calcidius, Macrobius and Martianus respecting the movement of the planets Mercury and Venus.

An important factor affecting the growth and dissemination of Neoplatonism was the rise of Islam. Like the Christian faith, that of Islam required some type of intellectual foundation, if only as a corrective to the literal interpretations of the Koran being urged by Mohammedan

fundamentalists. (!) Generally, however, in Islam there was not the cooperation between philosophers and theologians that was to produce the high scholasticism of the 13th century in western Europe. On the other hand there was a greater development of profane science within Islam, from which writers such as St. Thomas drew the inspiration for many of their scientific theories. Brief mention is made here of the teachings of Avicenna, Averroes and Alpetragius — although St. Thomas had a more extensive knowledge of Arabian thought than these names alone would indicate.

Avicenna, with strong religious motivation and pronounced mystical tendencies, proposed a theory of emanation in which all things flowed from the One through a series of Intelligences. He associated various later intelligences with the spheres of the different planets, and he equated the number of astronomical spheres with that of separated intelligences, the angels of revelation. For Avicenna, like Aristotle, the universe was made up of concentric spheres. At the centre was the earth, surrounded by the regions of water, air and fire; above the earth was the lowest of the celestial spheres, that of the moon, and so on to the highest sphere, beyond which there was nothing. Avicenna considered all natural bodies to be made up of two principles, matter and form, and insisted that the first form that comes to matter, the 'form of corporeity,' makes matter to be a body. He is noted also for his elaborate theory of the elements and how these enter into the structure of compounds.

Averroes proposed a number of astronomical views in his treatise *De Substantia Orbis*. One such view is criticized by St. Thomas in the *Summa*, namely that the heavenly body is itself the matter of the heavens. (Ia, 66, 2) Averroes' theory of the heavens was markedly Aristotelean although it shows some influence from the cosmogony of Plato's *Timaeus*. Following contemporary astronomers, he taught that there are 38 primary movements in the heavens, and, on this account, argued to the existence of 38 separate movers. The movers of the heavenly spheres are, for him, Intelligences, which have emanated from each other in succession. At the centre of the universe are the four elements and the bodies they compose, which are made from primary matter and from forms given them by an 'Agent Intellect'. For Averroes, the world is eternal; it has certainly always existed, and it will always continue to exist.

Alpetragius, or al-Bitruju, while less important philosophically than either Avicenna or Averroes, merits attention for his astronomical theories, which were known to both St. Albert and St. Thomas. According to Alpetragius, all movements of the heavens participate in the diurnal movement of the ninth celestial sphere; the movement of the eighth sphere, on the other hand, accounts for the slow transformations that take place in the sublunary region through generation and corruption. Both St. Albert and St. Thomas modified this explanation to have the sublunary region influenced by all of the intermediate spheres in their proper movements.

The influence of medieval Judaism on St. Thomas' views may be seen from a brief analysis of the writings of Avicebron and Moses Maimonides. Avicebron, or Solomon Ibn Gabirol, was a Spanish Jew whose *Fons Vitae* came to be well known to scholastics. Neoplatonic in inspiration, its doctrine was also imbued with the Jewish faith; through its insistence on such fundamental notions as God's oneness, absolute freedom and role in creation, it came to be generally acceptable to scholastic theologians. Avicebron is best known for his doctrine of universal hylomorphism, according to which all substances, even spiritual substances such as angels, are composed of matter and form. When discussing the formation of the universe, he presents what is essentially a cosmogony, with most of its details taken from Genesis and with occasional inspiration from the *Timaeus*.

Moses Maimonides, referred to by St. Thomas as Rabbi Moses, owes his fame to the *Guide for the Perplexed*, a treatise that deals not so much with metaphysics as with Jewish theology. Both

Neoplatonic and Aristotelean in inspiration, it shows also the influence of Arabian philosophy. As opposed to Avicebron, Maimonides taught that pure intelligences are free from matter; like St. Thomas, he argued that the matter to be found in the heavenly bodies is different from that in the sublunary region. He held for the nine celestial spheres, each dominated by an intelligence, and listed the tenth intelligence as the Agent Intellect, directly influencing the activities of man. Below the lowest sphere is the sublunary world, the proper place of the four elements, which is subject to the action of all the intervening spheres. Moses held that the world was not eternal, that it was created by God from nothing, and in time, but that one could not prove these conclusions by reason and must accept them on faith — a position that St. Thomas was to make his own. (Ia, 46. 1 & 2).

A final doctrine characteristic of Neoplatonism was that of the world soul, which taught that an *anima mundi* animates the material universe in much the same way as man's soul animates his body. The teaching derives from Plato's

Timaeus; although rejected by Aristotle, it was taken up by the Stoics and reappeared in a fully elaborated form in the *Enneads* of Plotinus. Neoplatonists such as Plotinus viewed the world soul as an intermediary between the sensible world and that of the Intelligences. The Greek Fathers made some use of the doctrine, occasionally likening the Holy Spirit to an *anima mundi* in their interpretation of the text, And the spirit of God moved over the waters. The Latin Fathers, on the other hand, generally shied away from such comparisons. Possibly under their influence, later scholastic thinkers rejected the concept of a world soul as a pagan doctrine akin to pantheism and opposed to Christian Revelation.

Hexaemeron: St. Thomas' Analysis

Like his teacher, St. Albert the Great, St. Thomas wrote two theological expositions based on the *Hexaemeron*, that of his commentary on the *Sentences* (II, 12-15) and that of the *Summa Theologlae* (Ia. 66-74). Apart from these, he wrote at length on the related question of the creation of unformed matter in *De potentia* (IV, 1-2). Chronologically, the first exposition was that of the *Sentences*; the remaining two belong to the same period of St. Thomas' life, although *De potentia* seems to be the earlier work. For all practical purposes we may reduce the three to two stages in the development of St. Thomas' thought: that of the *Sentences* and that of his later writings.

[I omit much of Fr. Wallace's analytical sketch that is irrelevant to our present purposes. I also note with some bewilderment, that Fr. Wallace omits any mention of Questions 44 through 47 in the first part of the *Summa*. These questions deal with creation as such and are absolutely crucial for any understanding of St. Thomas' teaching on the Six Days. Ph.]

In the commentary on the *Sentences*, the point that is noteworthy is a reaction to two traditions, one favoured by St. Bonaventure and the other by St. Albert the Great. The debate is sketched in an article entitled 'Whether all things were created simultaneously and as distinct species'. The reply begins by stating a general attitude towards the truths of faith:

> There are some things that are by their very nature the substance of the faith, as to say of God that He is three and one, and other similar things, about which it is forbidden for anyone to think otherwise. ... There are other things that relate to the faith only incidentally ... and, with respect to these, Christian authors have different opinions, interpreting the Sacred Scripture in various ways. Thus with respect to the origin of the world, there is one point that is of the substance of faith, viz., to know that it began by creation, on which all the authors in question are in agreement. But the manner and the order according to which creation took place concerns the faith only incidentally, in so far as it has been recorded in Scripture, and of these things the aforementioned authors, safeguarding the truth by their various interpretations, have reported different things. (II *Sent.* 12. 3,

2.).

At this point, recalling the two different interpretations regarding the account of creation, St. Thomas declares that, if the opinion regarding successive creation is 'more common, and seems superficially to be more in accord with the letter,' that of St. Augustine is 'more conformed to reason and better adapted to preserve Sacred Scripture from the mockery of infidels', a point that St. Augustine had himself made. Thus, St. Thomas concludes, this last opinion has my preference'; yet he adds that he will undertake to defend both interpretations.

De Potentia and *Summa*

Comparing the exposition in the *Sentence*, with that in *De potentia* and that in the *Summa*, we note immediately the same line of thought in all three. First there is a discussion of the two traditional interpretations, then a statement of the essential rules for interpreting Scripture, i.e. not to reject anything that is of faith, and not to attribute to Sacred Scripture statements that are manifestly opposed to truths that have been well established by reason. What is remarkable is that in both of the later works St. Thomas does not indicate any preference between the two interpretations, but discusses them on an equal footing. Thus he concludes his presentation of the controversy in *De potentia*, 'Seeing that neither the one nor the other of these opinions is opposed to the truth of faith, and that the text can be interpreted in a way that accords with either sense, defending both of them, we will reply to the objections raised on either side.'

In the *Summa*, where he takes the same attitude, St. Thomas shows concern, if not to minimize the differences between the two interpretations, at least to de-emphasize their importance. He is prudent and reserved in interpreting the controversial Biblical texts. It is difficult to say why he did not show his preference for one or other of the interpretations in these later writings. ... Regarding points of specific detail, there is not much difference between St. Thomas' earlier and later writings. The treatise in the *Summa* represents a complete reworking of the materials he had earlier presented, but without any marked change in doctrine.

Hexaemeron: Later Interpretations

For centuries after St. Thomas, theological exegesis did little more than rework the interpretations of the Church Fathers, particularly those treated systematically by Peter Lombard in the *Sentence*, and made part of the high scholasticism of the 13th century doctors. Generally the writers of these centuries — **Francis Suarez** (1617), for example, in his *De opere sex dierum* — taught the reality of the six days and a temporal succession in the production of the various works. **Cajetan**, who espoused Augustine's theory of simultaneous creation, was a notable exception.

The discoveries attending the rise of modern science were slow to influence the theologians. Not until the second half of the 18th century or, in some instances, until the 19th century did the contributions of Galileo, Copernicus, and Sir Isaac Newton effect a noticeable change in theological thought patterns. Hitherto most theological speculation continued to cling to the central themes of Aristotelian cosmology, usually modified in a few particulars to favour the Ptolemaic system. With the application of Newtonian ideas to cosmogony by such men as Immanuel Kant and Pierre Simon de Laplace, however, and with the development of evolutionary theories by geologists and biologists, it became apparent that fundamentalist interpretations of Genesis would have to be replaced by teachings more in accord with modern science.

[I disagree with this last statement of Fr. Wallace and with the entire tone and subtle but obvious orientation of his thought here. However, this is not the place to debate these issues. Ph]

Scientific Concordism

Under such stimulation, some exegetes attempted a return to the allegorical interpretations of the Alexandrian school. Others went to greater extremes, seeing the creation account in Genesis as mere poetry, or supposing that Moses — and this without any textual support — was relating not the facts of creation but merely an account of visions given to Adam by God. Those who met with the greatest success, however, attempted a new type of concordism based on the theories of modern science. They generally argued that not only was the sacred text not compromised by advances in science, but that a startling harmony between the Scriptural and the scientific accounts was becoming more and more evident with each new discovery. The basis for this new exegesis was provided by the knowledge of the various geological eras and the time scale over which they had developed. Complete concord and harmony, it seemed, could be achieved by interpreting the Hebrew word *yom*, which means *day*, as a period not of twenty-four hours but of indeterminate duration. Thus the path seemed open to interpreting the six days as a way of speaking about the various geological eras. Some went so far as to identify only six epochs; they attempted to work out specific details for the evolutionary pattern within each epoch so as to coincide with the work of each day in Genesis.

Such attempts, however, were short-lived, since it soon became apparent that their foundations were insecure. **The days indicated in the Bible, for any literal exegesis, mean without doubt days of twenty four hours, marked off by an evening and a morning, and thus cannot be interpreted literally as periods of indefinite duration. …**

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Additional Comments

Paula Haigh

I will omit the next portions of Fr. Wallace's text in order to obviate any temptation to debate these issues. But for anyone wishing to know Fr. Wallace's position, I think it may be fairly summed up as what is now becoming a quite conventional statement, even a cliché: the Bible is not a text-book of science; or, in Fr.'s own words, "the inspired authors had no intention of furnishing scientific information about nature." He also concludes: "Hence the order of the six days is not objectively chronological as much as it is systematic and logical …" Back to St. Augustine, though it seems from Fr. Wallace's analysis of "Contemporary Exegesis" that today the prevailing view is not so much that of St. Augustine as it is a quite new — and traditionally alien — belief that Genesis, at least Gen. 1-11, is some kind of literary genre that would place the sacred text, ultimately, and quite completely in the realm of fiction.

I will close the summary of Fr. Wallace with two paragraphs on Teilhard de Chardin.

> Somewhat similar to these cosmogonical theories (the big-bang and the steady-state theories) but with much broader philosophical and theological implications, is the evolutionary theory of P. Teilhard de Chardin. Teilhard works within the general framework of the 'big-bang' theory of the expanding universe, but adds to it a theory of organic and cultural evolution that embraces the whole of salvation history. In his view, the entire universe develops from two competing energies: tangential, which corresponds to the 'Without' of things; and radial, which corresponds to their 'Within'. Tangential energy obeys the law of entropy, whereby the physical energy of the universe is running down; radial energy, on the other hand, obeys the law of complexification, whereby the psychic component of the universe is continually on the increase. Actually, in this theory, all energy is psychic; thus the primordial matter of which the universe is composed already contains within itself consciousness and the higher manifestations of psychic activity, including the life of the spirit on both a natural and a supernatural plane, that are to appear in the universe's history. The sweep of this evolutionary proposal is so great as to account not only for the production of the stars and planets, but also for the genesis of life on earth, the evolution of thought, Christogenesis, the evolution of the Church and the final convergence of both nature and supernature at the Omega Point, which is identified with God Himself.
>
> The theory of Teilhard de Chardin is one of the most thorough-going types of scientific concordism that has ever been proposed. It accepts as incontestable truths all of the theories of biogenesis and organic evolution, and would interpret the history of salvation as a detailed working out of evolutionary principles in the order both of nature and of grace. On this account, its similarities with St. Thomas's teaching are more superficial than real. Granted there are some parallels between the Aristotelean concept of primary matter and that of a proto-matter or cosmic energy underlying all evolutionary development, there are also pronounced differences. For one, St. Thomas' primary matter is pure potentiality and in no way can be said to contain latent within itself life, consciousness and spiritual entities, as does Teilhard's primordial energy. More significant, however, is the attitude of mind that differentiates the two thinkers: Teilhard, the professional scientist, is so sure of his privileged insight that he must make all of theology conform to it: St. Thomas. the professional theologian, is so concerned over the difficulties of any simple concordism that he must adopt an attitude of prudent reserve before the science of his day.

Concordism, or the attempt to reconcile scientific theories, to show them to be in accord or concord with the teachings of Holy Scripture, is in disfavor today largely, I believe, because of the really ridiculous failures to achieve any such reconciliation on the part of men in the 18th and 19th centuries who propounded and developed what is now referred to as the day-age theory. Famous names of this school are **Buffon** (1707-1788). **Jean Deluc** in the 1790's, **Peter Simon Pallas** (1741-1811), **A. G. Werner** (1750-1817) and **Cuvier** (1769-1832). Most of these men believed in successive creations over these vast evolutionary ages which, as Fr. Wallace clearly acknowledges

impossible to reconcile with Genesis One.

Fr. William Wallace terms the position of Teilhard de Chardin concordist and attributes concordism to his views but I must confess that I fail to see with what the theories of Teilhard de Chardin are concording other than with his own interior vision. For they certainly cannot be described as even remotely attempting to accord or concord with Holy Scripture.

However, it is this kind of concordism that has given a bad name to all efforts to reconcile the Creation account of Genesis with scientific findings about nature and the universe. But the Creationist position, now quite fully developed by Creationist scientists such as **Dr. Henry M. Morris, Dr. Duane T. Gish, Dr. George Howe, Dr. Robert Brown, Dr. Harold Coffin**, and many others, in no way strains the sense of Scripture and is much more thoroughly, positively and even ruthlessly scientific than evolutionary science because it is free of the fallacies, difficulties and myriad other weaknesses of that false hypothesis.

And so, returning to the Fathers of the Church and their interpretation of Genesis, I find three positions there.

1) The first is that of St. Augustine: instantaneous-simultaneous creation of all things in the beginning but with the days of creation week interpreted only as a logical-literary pattern and not as indicating any real flow of time (*dies non designetur temporis successio, sed solum ordo naturae* — ST. Ia, 68, 1). Then, as Fr. Wallace says, St. Augustine made use of the neoplatonic notion of **seminal reasons** for these primordial creations “and the restricted form of evolution it implied”. I have yet to find a definition on the part of our Catholic theistic evolutionists for this "restricted form of evolution" otherwise termed "moderate evolution," "mitigated evolution", etc. However, I come more and more to suspect that it is nothing but the variation within kinds — or “microevolution” that the creationist recognizes. However that may be, it is difficult for me to see how an *ordo naturae* or natural order, emphasizing the natural, can be such and eliminate time. But apparently it does, somehow, since that is what St. Thomas says, interpreting St. Augustine’s position.

2) A second position is that which holds an instantaneous-simultaneous creation of all things in the beginning but the days of creation week are taken literally as natural units, periods of time, normal days just as the sacred text indicates. However, according to St. Thomas, creation proper seems to be limited to this initial production of all things while the work of the remaining five days is properly that of distinction and of adornment, but not of creation proper.

3) A third view seems to be that of most of the Fathers and is certainly that of St. Basil. In this view, there is the instantaneous-simultaneous creation of all things in the beginning, as he says:

> **In the beginning God made heaven and earth**. By naming the two extremes, he (Moses) 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 two 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. (Hom. 1.)

However, the most noteworthy aspect of this third position is this: after saying that all things were created in the beginning, St. Basil goes on, throughout his remaining exegesis of Genesis One to speak of things being created, immediately, on each of the six days. And the six days are real, literal, natural days in his mind. And this, it seems to me, is precisely what the sacred text indicates. In other words, the first verse of Genesis **In the beginning, God created heaven and earth** lends itself and is open to two interpretations at the same time with no straining of either sense. One can take it as indicating the creation of **all** things or as specifying only a narrower meaning of both **heaven** and of **earth**.

4) And this brings us to a possible fourth position which I will advocate but more or less in conjunction with the third, or, you might say, as vacillating between the third and fourth. In this

fourth view, the heaven and earth of verse 1 are taken as specifying only one part of the total heavens and as specifying an earth that is as yet but a watery mass. Then, in this view, there are real creations by God on each of the 6 days of creation week so that this fourth view could be termed the successive creations view bound into the temporal form of a week. And of course, that latter clause is crucially important to distinguish this view of successive creations from those of a day-age theory.

The best evidence for this fourth view seems to be the use of the word create which is used three times in Genesis One, in verses 1, 21, and 27 respectively, for **heaven** and **earth**, for the marine animals, and for man, for whom **create** is used three times as if to call attention to a special creation.

But it seems strange and one sees no apparent reason for the singling out of marine life as opposed to the birds and all the land animals and even the plant kingdom, for special creation. And so, I wonder if the words rendered in English as **Let there be** may not also signify properly creative acts of God? If so, then light, the firmament, and all the celestial bodies may be included among directly and properly created beings. And in view of the meaning of kinds for both plants and animals, I wonder if it is not really necessary to postulate directly creative acts for these beings also? For the kinds can neither develop nor evolve and surely require some new quantity or quality of nature that nature itself cannot supply, but only God. And therefore, the kinds, it seems, with their specific DNA codes, require the properly creative power of God in a special and direct way.

These, then, are the Catholic, doctrinally safe positions on Creation that one gleans from Catholic tradition through the Fathers up to St. Thomas and his best commentators Suarez and Cajetan. I, personally, find it something of an historical tragedy that so great a theologian as Garrigou-Lagrange did not face the evolutionary threat head-on but rather hedged and compromised with the moderate and mitigated concepts that seem to have fixed Catholic thought firmly on the fence or else given it an excuse to fall completely into the evolutionary trap.

But because of this kind of trend within orthodox Catholic theology, the Biblical Commission's Decree of June 30. 1909, did open up what seems to be a fifth or yet another Catholic, doctrinally safe position when it ruled that the word *yom* in Genesis One could be taken in "a less strict sense as signifying a certain space of time."

Now I find this extremely ambiguous and if I were a theistic evolutionist but at the same time very anxious to remain faithful to Catholic teaching (a rather rare combination, I admit) I think I would be literally tearing out my hair trying to figure out just what, precisely, I could take to be meant by this "less strict sense signifying a certain space of time." But I have discovered that this must be a scrupulous response to the decree for many very sound and devout Catholics have not hesitated to take it as signifying "a certain space of time" that amounts to 20 billion years in the case of the universe and 4.6 for the earth or whatever the latest "scientific" figures are. And in all fairness, I should quote from Fr. Wm. Wallace's footnote to his approving presentation of the big-bang theory:

> Pius XII, in an address to the Pontifical Academy of Science on Nov. 22, 1951, gave tentative approval to this type of interpretation with the statement, "In fact, it would seem that present-day science, with one sweeping step back across millions of centuries, has succeeded in bearing witness to that primordial *fiat lux* (let there be light) uttered at a moment when, along with matter, there burst forth from nothing a sea of light and radiation, while particles of chemical elements split and formed into millions of galaxies." *Acta Apostolicae Sedis* 44 (1952), p. 4.

It is this remark alone, I believe, that held Fr. Patrick O'Connell from accepting the literal 6-days of Creation Week as the Fathers of the Church (excluding St. Augustine) had done. And I can only bow my head in admiration at such great faith and submission to the Vicar of Christ.

However, the fact remains that this kind of address or allocution is simply not on a *par* with encyclicals and other more official pronouncements of the Holy Father and I do not think it is failing in submission to find in this remark of the Holy Father a clear evidence of insufficient information on his part. And that was in 1950. Since that time, the Creationist scientists have clearly exposed, time and again, and continue to do so with increasingly compelling evidence, the essential unreliability of radioactive dating methods. They assume much more than they prove. And the reason they assume so much and so insistently is because evolution needs time above all things.

And in case you won't take my word for it, listen first to Rick Gore, writing in the *National Geographic* (Sept. 1976) on "The New Biology" (p. 390.)

> More baffling still is how these proteins and genes got together in the first self-replicating cell. The odds against the right molecules being in the right place at the right time are staggering. Yes, as science measures it, so is the time scale on which nature works. Indeed, what seems an impossible occurrence at any one moment would, given untold eons, become a certainty. (Emphases added).

The certainty alluded to here is a fiction because it is based entirely on the mythical universe of evolutionary processes which omits the *2nd Law of Thermodynamics* — the law considered by no less an authority than **Isaac Asimov** to be "the most powerful and most fundamental generalization about the universe that scientists have ever been able to make." (Quoted in *Troubled Waters of Evolution*, by Dr. Henry Morris, p. 115.)

In the real universe where the *2nd Law* operates, the more time you have the more things run down, energy decreases, and disorder increases, in the over-all picture.

Thus, the evolutionist is able to make his dream come true only by constructing an unreal, mythical universe — a veritable utopia — wherein the *2nd Law* finds no place.

But hear, also, Professor Harold Slusher, speaking in Joplin, Missouri, June, 1976:

> The evolutionist's scheme of things works on time. It is something that feeds on time. Without a lot of time, the evolutionist is out of business. The evolutionist sometimes, when he is in a very tolerant mood, will admit that there are difficulties with the fossil record, that there are but discontinuities in the fossil record; he'll admit that some of his arguments dealing with mutations are not correct, that mutations produce a downward movement of organisms rather than an upward movement; he'll admit that arguments from embryology and so forth are not necessarily good arguments. That's when he's in a good mood. He'll admit difficulties like that. ... But when it comes to the **time** question, that's when the honeymoon is over. If the evolutionist gives any ground at all on the time question, he is finished. If he, for instance, would admit that perhaps there are arguments that things are just a few thousand years old, he might as well give up and go home... since **time is the key aspect** of the evolutionist's position. ... So when it comes to the time question, you have really hit the heart of the matter.

And that being so, as it most assuredly is, if you give the evolutionist the time he wants — and must have — then you might as well give him the whole bag and stop deluding yourself that you are holding to a "mitigated" or moderate" or "restricted" form of evolution. And, having given him his time, if you have not fallen off the fence completely, you are surely leaning headlong over on the evolutionary side. And Mr. Evolutionist is waiting there to welcome you with open arms.

Therefore, in view of the plain teaching of Holy Scripture on the 6 days of creation and also in view of the real science of the question, there is simply no room in a true Creationist position for the postulated and fictional 20 billion years of evolutionary time, nor for the "millions of centuries" that the saintly Pope Pius XII spoke of in a moment of admiration for the *Fiat lux* of Genesis; nor even yet for the "less strict sense ... signifying a certain space of time" of the Biblical Commission's 1909 Decree!

However, in the words of this same saintly Pontiff, Pius XII, in his great encyclical *Humani Generis* (1950), I await the judgment of the Church and am prepared to submit to it with all my

heart and mind, intellect and will, with God's grace.

In the meantime, though, since Holy Church has provided this alternative, I accept the sense of the word ***day*** in Genesis One "in its strict sense as the natural day" and will continue to discuss the reasons for this choice in the Newsletter and in other publications of the Catholic Center for Creation Research.

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