

GEOGRAPHICAL AND CARTOGRAPHICAL CONCEPTS IN THE PATRISTIC PERIOD WRITINGS¹

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Introduction

The boundaries of the world seen by the geographers in the beginning of the Christian Era were: Southwards they extended to the White Nile and the northern boundary of the Sudan; in the west they included the Canary Isles and the British Isles; to the north they reached as far as the German Seas and thence over the Low Countries of Russia and the Aral Sea to the sources of the Indus and the Ganges. In the Orient they took in Arabia and the coasts of India and Indo-China as far as the Archipelago. Their certain knowledge, did not extend beyond the boundaries of the Roman Empire when it was at its zenith.

We can see that at Ptolemy and also in some Roman maps. The profound difference between the Roman and the Greek mind is illustrated with particular clarity in their maps. Greeks create a mathematical geography, with its system of latitudes and longitudes, its astronomical measurements, and its problem of projections. Romans wanted a practical map to be used for military and administrative purposes. Disregarding the elaborate projections of the Greeks, they reverted to the old disk map of the Ionian geographers as being better adapted to their purposes.

During the Middle Ages geographical knowledge existed in many forms. Knowledge of more distant places could come from travelers, of which there were many sorts: merchants, artisans, laborers, pilgrims, missionaries, warriors, troubadours, itinerant scholars, civil and ecclesiastical officials. In libraries there were books such as Pliny's Natural History or Isidore of Seville's Etymologies. These books offered geographical knowledge of a more exotic sort and on a grander scale in the form of written descriptions. Pliny and Isidore communicated a substantial collection of geographical lore, some of it mythological, through use of the "periplus"- a sequential list of the cities, rivers, mountains and other topographical features encountered as one navigated a coastline.

This information was usually accompanied by interesting historical, cultural, and theological detail. Drawing on earlier compilations, Pliny and Isidore led their readers on a swift tour of the periphery of the European and African continents. Towards the end of the Middle Ages, new travel literature began to enrich the store of such knowledge.

Traditional literary sources also dealt with **climate**, dividing the terrestrial globe into climatic zones or "climes." In a typical scheme, there were five of these: two frigid zones (the arctic and antarctic) around the poles, a temperate zone adjacent to each of these, and a torrid zone straddling the equator and according to some divided into two distinct rings by a great equatorial ocean. The torrid zone was considered uninhabitable on account of its heat - though some scholars disputed this claim. Medieval Europeans, of course, found themselves living in the northern temperate zone.

On the opposite side of the earth, in the southern temperate zone, are the **antipodes**. Whether the antipodes are inhabited by antipodeans (people who walk upside down) was a matter of dispute.

The most numerous, most interesting, and most studied medieval maps are the **mappaemundi, or world maps**.

The common form of mappaemundi was the T-O map, associated with Isidore of Seville, which gave a schematic representation of the three continents - Europe, Africa and Asia. The "T" inserted with the "O"

¹ Our aim in this work is not intended to be exhaustive concerning the subject and the authors of this period but it is rather the setting of the most relevant aspects to a future extending of the subject.

represents the waterways (the Don and Nile Rivers and the Mediterranean Sea) believed to divide the known land-mass into its major parts: Asia at the top of the map, Europe at the lower left, and Africa at the lower right. Nonschematic versions of the T-O map, which departed from the rigid T-O diagram in order to incorporate a variety of geographical detail, were also produced. Another common type of map was zonal, featuring the climatic zones as its organizing principle.

It is not disputed that many of these maps were far more simplistic than Ptolemy globes (which included latitude and longitude and vast open seas). What is disputed is the meaning or historical interpretation of these maps. In abrupt contrast to ancient Greek maps, many medieval maps were limited to three tightly grouped continents: Asia, Africa and Europe. Tiny areas of water surround the edge of these maps, then they end. These maps depict Biblical concepts, events and places.

Views and statements of medieval theologians, Christian writers or Fathers of Church regarding geographical and cartographical concepts.

The earliest Christian literature was predominantly exegetical. So, the teachings of the ancients were always tested in order to see whether they were in harmony with Holy Writ.

From this time several of the Fathers pronounced in favor of the theory of the flatness of the earth's surface which had been brought up in later Roman cosmographies. Among the advocates of this error were St. John Chrysostom, Cosmas, and others. Cosmas Indicopleustes advanced an especially grotesque elaboration of this doctrine. In his exaggeratedly narrow interpretation of the phraseology of Holy Writ he claimed that the world was constructed in the shape of the Tabernacle of the Covenant in the Old Testament. But long before his day there were men who believed in the sphericity of the earth.. Augustine declared that the doctrine of the sphericity of the earth in no way conflicted with Holy Writ, and later authors, especially the Venerable Bede, also attempted to prove it on scientific grounds.

For a considerable period the question of the Antipodes was beset with controversy. It was absolutely denied by Lactantius and several others, principally on religious grounds, as the people of the Antipodes could not have been saved.

The learning and opinions of the first few hundred years were comprehensively set forth in the tremendous work of Isidore of Seville (died 636), the "Etymologiæ" or "Origines", which for a long time enjoyed unlimited authority.

In chronological order we make references to followings Christian writers or Fathers of Church: Lactantius (260-330 AD), St. Cyril of Jerusalem (315-386 AD), Saint Basil, Bishop of Caesarea (329-379 AD), Saint John Chrysostom (347-407AD) St. Augustine of Hippo (354-430 AD), Cosmas Indicopleustes Of Alexandria (535-547), St. Isidore of seville (600-636 AD)

Lactantius

Lucius Caecilius Firmianus Lactantius AD 260-330 was a Christian apologist . The name Firmianus has misled some authors into believing that he was an Italian from Ferno, whereas he was an African by birth and a pupil of Arnobius who taught at Sicca Veneria. An inscription found at Cirta in Numidia, which mentions a certain L. Caecilius Firminianus, has led to the conclusion in some quarters that his family belonged to that place .

Lactantius was born a pagan and in his early life taught rhetoric in his native place. At the request of Emperor Diocletian he became an official professor of rhetoric in Nicomedia. One of his poems (Hodoeporicum) is an account of his journey from Africa to his new home. It is probable that his conversion to Christianity did not take place until after his removal to Nicomedia. It seems clear, however, that he could not retain his position as public teacher after the publication of Diocletian's first Edict against the Christians (24 February, 303). After his dismissal it was not easy to find pupils in that Greek city who would patronize a teacher of Latin, and he was in consequence reduced to such poverty that he at times lacked the necessities of life. In those circumstances, he attempted to eke out a living by writing.

Like so many of the early Christian authors, Lactantius in all his works betrays his dependence on classical models and true to the requirements of his profession, he is polished rather than profound. He well merits the designation of the "Christian Cicero" bestowed on him by the humanists, for he exhibits many of the

shortcomings as well as the graces of his master. Among the works of his pen extant, the earliest is the "De Opificio Dei", written in 303 or 304 during the Diocletian persecution, and dedicated to a former pupil, a rich Christian named Demetrianus.

The apologetic principles underlying all the works of Lactantius are well set forth in this treatise, which may be considered as an introduction to his great work "The Divine Institutions" (Divinarum Institutionum), written between 303 and 311. This the most important of all the writings of Lactantius is systematic as well as apologetic and was intended to point out the futility of pagan beliefs and to establish the reasonableness and truth of Christianity.

It was the first attempt at a systematic exposition of Christian theology in Latin, and though aimed at certain pamphleteers who were aiding the persecutors by literary assaults on the Church, the work was planned on a scale sufficiently broad enough to silence all opponents.

Divine Institutes contains seven books:

Book I - Of the False Worship of the Gods; Book II - Of the Origin of Error; Book III - Of the False Wisdom of Philosophers; Book IV - Of True Wisdom and Religion; Book V - Of Justice; Book VI - Of True Worship; Book VII - Of a Happy Life

The "Epitome Divinarum Institutionum", made by Lactantius at the request of a friend named Pentadius, is much more than a mere abbreviation, rather a more summary treatment of the subject dealt with in the older work.

Another treatise, "De Ira Dei", directed against the Stoics and Epicureans, is supplementary to the "Divine Institutions" and deals with anthropomorphism in its true sense.

Knowing the bent of Lactantius's mind it is not surprising that the only historical work we have from his pen, "De Mortibus Persecutorum", should have an apologetic character. In this work, we have an account of the frightful deaths of the principal persecutors of the Christians, Nero, Domitian, Decius, Valerian, Aurelian, and the contemporaries of Lactantius himself, Diocletian, Maximian, Galerius, and Maximus.

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The Divine Institutions was, a vigorous riposte to the pagan criticism and persecution of Christianity that came to a head under the Roman emperor Diocletian in the early fourth century AD

Lactantius was also concerned, however, to put forward, for the benefit of educated pagans (such as he had earlier been), the Christian position on the nature of God and man, the history of religion on earth, the beginning and end of the world, the life and mission of Christ, Christian moral philosophy and ethics.

As both Christian apologetic and summary of Christian thought, the Divine Institutes can be seen as a predecessor of Augustine's City of God.

Lactantius enjoyed a high reputation in late antiquity and in the Renaissance as apologist, rhetorician, and stylist.²

Lactantius ridiculed the idea that people could walk with their feet above their heads or that rain and snow could fall upwards towards the earth. This argument, based on Biblical grounds, was that the world was not spherical, but flat. Lactantius repeatedly criticizes philosophers in his writings as fools.

In "Divine Institutes, Book III" and in "Epitome of the Divine Institutes" we can read the following texts about the Antipodes³.

"How is it with those who imagine that there are antipodes opposite to our footsteps? Do they say anything to the purpose? Or is there any one so senseless as to believe that there are men whose footsteps are higher than their heads? Or that the things which with us are in a recumbent position, with them hang in an inverted direction? That the crops and trees grow downwards? that the rains, and snow, and hail fall upwards to the earth? And does any one wonder that hanging gardens are mentioned among the Seven

² Extract from The Catholic Encyclopedia, Volume VIII, art. "Lactantius" and from Lactantius, The Divine Institutes, from The Ante-Nicene Fathers: Translations of the writings of the Fathers down to A.D. 325, p 94

³ Lactantius, The Divine Institutes, *op.cit.*, pp96-98

Wonders of the World, when philosophers make hanging fields, and seas, and cities, and mountains? The origin of this error must also be set forth by us.

For they are always deceived in the same manner. For when they have assumed anything false in the commencement of their investigations, led by the resemblance of the truth, they necessarily fall into those things which are its consequences. Thus they fall into many ridiculous things; because those things which are in agreement with false things, must themselves be false. But since they placed confidence in the first, they do not consider the character of those things which follow, but defend them in every way; whereas they ought to judge from those which follow, whether the first are true or false.

What course of argument, therefore, led them to the idea of the antipodes? They saw the courses of the stars travelling towards the west; they saw that the sun and the moon always set towards the same quarter, and rise from the same. But since they did not perceive what contrivance regulated their courses, nor how they returned from the west to the east, but supposed that the heaven itself sloped downwards in every direction, which appearance it must present on account of its immense breadth, they thought that the world is round like a ball, and they fancied that the heaven revolves in accordance with the motion of the heavenly bodies; and thus that the stars and sun, when they have set, by the very rapidity of the motion of the world are borne back to the east. Therefore they both constructed brazen orbs, as though after the figure of the world, and engraved upon them certain monstrous images, which they said were constellations. It followed, therefore, from this rotundity of the heaven, that the earth was enclosed in the midst of its curved surface. But if this were so, the earth also itself must be like a globe; for that could not possibly be anything but round, which was held enclosed by that which was round. But if the earth also were round, it must necessarily happen that it should present the same appearance to all parts of the heaven; that is. that it should raise aloft mountains, extend plains, and have level seas. And if this were so, that last consequence also followed, that there would be no part of the earth uninhabited by men and the other animals. Thus the rotundity of the earth leads, in addition, to the invention of those suspended antipodes.

But if you inquire from those who defend these marvelous fictions, why all things do not fall into that lower part of the heaven, they reply that such is the nature of things, that heavy bodies are borne to the middle, and that they are all joined together towards the middle, as we see spokes in a wheel; but that the bodies which are light, as mist, smoke, and fire, are borne away from the middle, so as to seek the heaven. I am at a loss what to say respecting those who, when they have once erred, consistently persevere in their folly, and defend one vain thing by another; but that I sometimes imagine that they either discuss philosophy for the sake of a jest, or purposely and knowingly undertake to defend falsehoods, as if to exercise or display their talents on false subjects. But I should be able to prove by many arguments that it is impossible for the heaven to be lower than the earth, were it not that this book must now be concluded, and that some things still remain, which are more necessary for the present work. And since it is not the work of a single book to run over the errors of each individually, let it be sufficient to have enumerated a few, from which the nature of the others may be understood.” (Lactantius, Divine Institutes, Book III, Chapter 24 - Of the antipodes, the heaven, and the stars.)

“These things, truly, are of small importance, but they arise from the same falsehood. Xenophanes said that the orb of the moon is eighteen times larger than this earth of ours; and that within its compass is contained another earth, which is inhabited by men and animals of every kind. About the antipodes also one can neither hear nor speak without laughter. It is asserted as something serious, that we should believe that there are men who have their feet opposite to ours.” (Lactantius, Epitome of the Divine Institutes, Chapter 39)⁴

⁴ Lactantius, The Epitome of the Divine Institutes, *op.cit.*, p 120.

St. Cyril of Jerusalem (315-386 A D)⁵

St. Cyril Bishop of Jerusalem was born about 315 AD; died probably 18 March, 386 AD. In the East his feast is celebrated on the 18th of March, in the West on the 18th or 20th. Little is known of his life. We gather information concerning him from his younger contemporaries, Epiphanius, Jerome, and Rufinus, as well as from the fifth-century historians, Socrates, Sozomen and Theodoret. Cyril himself gives us the date of his "Catecheses" as fully seventy years after the Emperor Probus, that is about 347, if he is exact.

The extant works of St. Cyril of Jerusalem include a sermon on the Pool of Bethesda, a letter to the Emperor Constantius, three small fragments, and the famous "Catecheses". The letter describes a wonderful cross of light, extending from Calvary to the Mount of Olives, which appeared in the air on the nones of May, after Pentecost, toward the beginning of the saint's episcopate. The catechetical lectures are among the most precious remains of Christian antiquity. They include an introductory address, eighteen instructions delivered in Lent to those who were preparing for baptism, and five "mystagogical" instructions given during Easter week to the same persons after their baptism. They contain interesting local references as to the finding of the Cross, the position of Calvary in relation to the walls, to the other holy places, and to the great basilica built by Constantine in which these conferences were delivered. They seem to have been spoken extempore, and written down afterwards. The style is admirably clear, dignified, and logical; the tone is serious and full of piety. The subject is thus divided: 1. Hortatory. 2. On sin, and confidence in God's pardon. 3. On baptism, how water receives the power of sanctifying; as it cleanses the body, so the Spirit seals the soul. 4. An abridged account of the Faith. 5. On the nature of faith. 6-18. On the Creed: 6. On the monarchy of God, and the various heresies which deny it. 7. On the Father. 8. His omnipotence. 9. The Creator. 10. On the Lord Jesus Christ. 11. His Eternal Sonship. 12. His virgin birth. 13. His Passion. 14. His Resurrection and Ascension. 15. His second coming. 16-17 On the Holy Ghost. 18. On the resurrection of the body and the Church.

St. Cyril of Jerusalem seems to have been in the flat earth camp. Quotes frequently from the Bible and portrays earth as firmament floating on water using Gen. i. 6. He wrote in his Catechetical Lectures: Lecture IX:

"For what fault have they to find with the vast creation of God? they, who ought to have been struck with amazement on beholding the vaultings of the heavens: they, who ought to have worshipped Him who reared the sky as a dome, who out of the fluid nature of the waters formed the stable substance of the heaven. For God said, Let there be a firmament in the midst of the water. God spake once for all, and it stands fast, and falls not. The heaven is water, and the orbs therein, sun, moon, and stars are of fire: and how do the orbs of fire run their course in the water? But if any one disputes this because of the opposite natures of fire and water, let him remember the fire which in the time of Moses in Egypt flamed amid the hail, and observe the all-wise workmanship of God. For since there was need of water, because the earth was to be tilled, He made the heaven above of water that when the region of the earth should need watering by showers, the heaven might from its nature be ready for this purpose."⁶

Saint Basil, Bishop of Caesarea

St. Basil the Great, was bishop of Caesarea, a leading churchman in the 4th century. The Eastern Orthodox Church considers him a saint and one of the Three Holy Hierarchs, together with Gregory Nazianzus and John Chrysostom. Basil, Gregory Nazianzus, and Basil's brother Gregory of Nyssa are called the Cappadocian Fathers. The Roman Catholic Church considers him a saint and a Doctor of the Church.

St Basil was born about 330 at Caesarea in Cappadocia. He came from a wealthy and pious family which gave a number of saints, including his father, also named Basil, his mother Emmelia, grandmother Macrina the Elder, sister Macrina the Younger and brothers Gregory of Nyssa and Peter, who became Bishop of Sebaste. Some church historian presumed Theosebia was his youngest sister, who is also a saint among the Eastern Orthodox.

⁵ Extract from *The Catholic Encyclopedia, Volume IV*, art, "St. Cyril of Jerusalem" and The Catechetical Lectures of S. Cyril Archbishop of Jerusalem, by Philip Schaff editor, from Nicene and Post Nicene Fathers of the Christian Church, a selected library; in vol VII, pp346-351

⁶ The Catechetical Lectures of S. Cyril Archbishop of Jerusalem, *op.cit.*, vol VII, p 372

While still a child, the family moved to Pontus; but he soon returned to Cappadocia to live with his mother's relations, and seems to have been brought up by his grandmother Macrina. Eager to learn, he went to Constantinople and spent four or five years there and at Athens, where he had Gregory Nazianzus for a fellow student and became friends with the future emperor Julian. Both men were deeply influenced by Origen.

In 370 Eusebius, bishop of Caesarea, died, and Basil was chosen to succeed him. It was then that his great powers were called into action. Caesarea was an important diocese, and its bishop was, ex officio, exarch of the great diocese of Pontus. Hot-blooded and somewhat imperious, Basil was also generous and sympathetic. His zeal for orthodoxy did not blind him to what was good in an opponent; and for the sake of peace and charity he was content to waive the use of orthodox terminology when it could be surrendered without a sacrifice of truth. With all his might he resisted the emperor Valens, who strove to introduce Arianism into his diocese, and impressed the emperor so strongly that, although inclined to banish the intractable bishop, he left him unmolested.

To save the Church from Arianism, Basil entered into connections with the West, and with the help of Athanasius, he tried to overcome its distrustful attitude toward the Homoiousians. The difficulties had been enhanced by bringing in the question as to the essence of the Holy Spirit. Although Basil advocated objectively the consubstantiality of the Holy Spirit with the Father and the Son, he belonged to those, who, faithful to Eastern tradition, would not allow the predicate homoousios to the former; for this he was reproached as early as 371 by the Orthodox zealots among the monks, and Athanasius defended him. His relations also with Eustathius were maintained in spite of dogmatic differences and caused suspicion. On the other hand, Basil was grievously offended by the extreme adherents of Homoousianism, who seemed to him to be reviving the Sabellian heresy.

He did not live to see the end of the unhappy factional disturbances and the complete success of his continued exertions in behalf of Rome and the East. He suffered from liver illness and his excessive asceticism seems to have hastened him to an early death. A lasting monument of his episcopal care for the poor was the great institute before the gates of Caesarea, which was used as poorhouse, hospital, and hospice.

The principal theological writings of Basil are his *De Spiritu Sancto*, a lucid and edifying appeal to Scripture and early Christian tradition (to prove the divinity of the Holy Spirit), and his *Refutation of the Apology of the Impious Eunomius*, written in 363 or 364, three books against Eunomius of Cyzicus, the chief exponent of Anomoian Arianism. The first three books of the *Refutation* are his work; the fourth and fifth books that are usually included do not belong to Basil, or to Apollinaris of Laodicea, but probably to Didymus of Alexandria.

He was a famous preacher, and many of his homilies, including a series of Lenten lectures on the *Hexaëmeron*, and an exposition of the psalter, have been preserved. Some like that against usury and that on the famine in 368, are valuable for the history of morals; others illustrate the honor paid to martyrs and relics; the address to young men on the study of classical literature shows that Basil was lastingly influenced by his own education, which taught him to appreciate the propaedeutic importance of the classics.

His ascetic tendencies are exhibited in the *Moralia* and *Regulae*, ethical manuals for use in the world and the cloister respectively. Of the monastic rules traced to Basil, the shorter is the one most probably his work.

His three hundred letters reveal a rich and observant nature, which, despite the troubles of ill-health and ecclesiastical unrest, remained optimistic, tender and even playful. His principal efforts as a reformer were directed towards the improvement of the liturgy, and the reformation of the monastic orders of the East.

Most of the liturgies bearing the name of Basil, in their present form, are not his work, but they nevertheless preserve the a recollection of Basil's activity in this field in formularizing liturgical prayers and promoting church-song. One liturgy that can be attributed to him is *The Divine Liturgy of Saint Basil the Great*, a liturgy that is somewhat longer than the more commonly used *Divine Liturgy of John Chrysostom*;

All his works, and a few spuriously attributed to him, are available in the *Patrologia Graeca*, which includes Latin translations of varying quality. No critical edition is yet available.⁷

Basil of Caesarea in one of his Homily talks about the Earth shape, showing a good knowledge of this disputes:

⁷ Extract from *The Catholic Encyclopedia, Volume II*, art. "Saint Basil" and Introduction in *Basil: Letters and Select Works* by Philip Schaff editor, from *Nicene and Post Nicene Fathers of the Chrisrian Church*, a selected library; in vol VIII, pp 102-104

“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 snake them serve their own ends. For me grass is grass; plant, fish, wild beast, domestic animal, I take all in the literal sense. “For I am not ashamed of the gospel.” 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 these 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. (Basil of Caesarea, Hexameron, Homily IX .1 The creation of terrestrial animals)^a

Saint Basil is presumed to have possessed profound knowledge in astronomy and it appears that he foresaw the problems presented with the shape of the earth being a sphere and its contradiction to the Scriptures.

Saint John Chrysostom

John Chrysostom (347-407 AD) was a notable Christian bishop and preacher from the 4th and 5th centuries in Syria and Constantinople. He is famous for eloquence in public speaking and his denunciation of abuse of authority in the Church and in the Roman Empire of the time. He had notable ascetic sensibilities. After his death he was named Chrysostom, which comes from the Greek chrysostomos, “golden mouthed”. The Orthodox Church honors him as a saint (feastday, November 13) and count him among the Three Holy Hierarchs (feastday, January 30), together with Saints Basil the Great and Gregory the Theologian. He is also recognized by the Catholic Church, which considers him a saint and a Doctor of the Church, and the Church of England, who commemorate him on September 13.

His relics were stolen from Constantinople by Crusaders in 1204 and brought to Rome, but were returned on 27 November 2004 by Pope John Paul II.

He was born in Antioch of noble parents: his father was a high ranking military officer. His father died soon after his birth and so he was brought up by his Christian mother. He was baptised in 370 and tonsured a reader (one of the minor orders of the Church). He began his education under a pagan teacher named Libanius, but went on to study theology under Diodorus of Tarsus (one of the leaders of the later Antiochian school) while practising extreme asceticism.

In 398 he was called (somewhat against his will) to be the bishop in Constantinople. He deplored the fact that Imperial court protocol would now assign to him access to privileges greater than the highest state officials. During his time as bishop he adamantly refused to host lavish entertainments. This meant he was popular with the common people, but unpopular with the wealthy and the clergy. In a sermon soon after his arrival he said “people praise the predecessor to disparage the successor”. His reforms of the clergy were also unpopular with these groups. He told visiting regional preachers to return to the churches they were meant to be serving - without any pay out.

Two of his writings deserve special mention. He harmonized the liturgical life of the Church by revising the prayers and rubrics of the Divine Liturgy, or celebration of the Holy Eucharist. To this day, Eastern Orthodox churches typically celebrate the Divine Liturgy of John Chrysostom, together with Catholic churches that are

^a Basil: *Letters and Select Works, op.cit.*, p178.

in the Eastern or Byzantine rites. These same churches also read his Catechetical Homily at every Easter, the greatest feast of the church year.⁹

Saint John Chrysostom Regularly refers to the Earth having four corners as the Bible does in his sermons. For example, the following quotations come from Homilies Against the Jews: “every corner of the earth”, “her action is known in every corner of the earth”, “every corner of the earth seen by the sun”

He is quoted by Cosmas as stating *“Where are those who say that the heaven is in motion? Where are those who think it is spherical? For both these opinions are here swept away”*¹⁰. (Cosmas, Christian Topography, BookX)

“And we shewed how from the creation of the world, and how by heaven, and earth, the sea, the Creator is glorified. But to-day, after briefly philosophising on that same subject, we will proceed to another topic. For He not only made it,[the Creation] but provided also that when it was made, it should carry on its operations; not permitting it to be all immoveable, nor commanding it to be all in a state of motion. The heaven, for instance, hath remained immoveable, according as the prophet says, “He placed the heaven as a vault, and stretched it out as a tent over the earth.” [Isa. xl. 42.] But, on the other hand, the sun with the rest of the stars, runs on his course through every day.

*And again, the earth is fixed, but the waters are continually in motion; and not the waters only, but the clouds, and the frequent and successive showers, which return at their proper season.”*¹¹

Augustine of Hippo

St. Augustine of Hippo (November 13, 354–August 28, 430) is a saint and the pre-eminent Doctor of the Church according to Roman Catholicism, and is considered by Evangelical Protestants to be (together with the Apostle Paul and the Bible) the theological fountainhead of the Reformation teaching on salvation and grace.. Works of Saint Augustine, an African by birth, a Roman by education, a Milanese by baptism, still inspire many Christians all over the world.

Saint Augustine was born in 354 in Tagaste, a provincial Roman city in North Africa. He was raised and educated in Carthage. His mother Monica (Saint Monica) was a devout cristian and his father Patricius a pagan. As a youth Augustine followed the unpopular Manichaeian religion, much to the horror of his mother. In Carthage, he developed a relationship with a young woman who would be his concubine for over a decade and produce a son. His education and early career was in philosophy and rhetoric, the art of persuasion and public speaking. He taught in Tagaste and Carthage, but soon aspired to compete with the best, in Rome. However, Augustine grew disappointed with the Roman schools, which he found apathetic. Manichean friends introduced him to the prefect of the City of Rome, Symmachus, who had been asked to provide a professor of rhetoric for the imperial court at Milan.

The young provincial won the job and headed north to take up his position in late 384. At age thirty, Augustine had won the most visible academic chair in the Latin world, at a time when such posts gave ready access to political careers. However, he felt the tensions of life at an imperial court, lamenting one day as he rode in his carriage to deliver a grand speech before the emperor, that a drunken beggar he passed on the street had a less careworn existence than he.

In the summer of 386, in a garden, Augustine underwent a profound personal crisis and decided to convert to Christianity, abandon his career in rhetoric, quit his teaching position in Milan, give up any ideas of marriage (much to the horror of his mother), and devote himself full time to Jesus, religion, celibacy, and the priesthood. Ambrose baptized Augustine on Easter day in 387, and soon thereafter in 388 he returned to Africa. On his way back to Africa his mother died, as did his son soon after, leaving him relatively alone in the world.

Upon his return to north Africa he created a monastic foundation at Tagaste for himself and a group of friends. In 391 he was ordained a priest in Hippo Regius, (now Annaba, in Algeria). He became a famous

⁹ Extract from *The Catholic Encyclopedia, Volume II* art “Saint John Chrysostom”.and St. Chrysostom: On the Priesthood; Ascetic Treatises; Select Homilies and Letters, in vol IX from Nicene and Post Nicene Fathers of the Chrisrian Church, a selected library; Edited by Philip Schaff, p.384

¹⁰ McCrindle, J.W., The Christian Topography of Cosmas, an Egyptian monk,P. 346

¹¹ St. Chrysostom: On the Priesthood; Ascetic Treatises; Select Homilies and Letters, in vol IX from Nicene and Post Nicene Fathers of the Chrisrian Church, a selected library; Edited by Philip Schaff, p.419

preacher (more than 350 preserved sermons are believed to be authentic), and was noted for combating the Manichaean heresy.

In 396 he was made coadjutor bishop of Hippo (assistant with the right of succession on the death of the current bishop), and remained as bishop in Hippo until his death in 430. He left his monastery, but continued to lead a monastic life in the episcopal residence. He left a Rule (Latin, *Regula*) for his monastery that has led him to be designated the “patron saint of Regular Clergy,” that is, parish clergy who live by a monastic rule.

Augustine died on August 28, 430, during the siege of Hippo by the Vandals. He is said to have encouraged its citizens to resist the attacks, primarily on the grounds that the Vandals adhered to Arianism, which was heretical according to the doctrine of the Church, of which Augustine was a bishop.

Augustine remains a central figure, both within Christianity and in the history of Western thought. In both his philosophical and theological reasoning, he was much influenced by Platonism and Neoplatonism, particularly by the work of Plotinus, author of the *Enneads*. His generally favorable outlook upon Neoplatonic thought contributed to the “baptism” of Greek thought and its entrance into the Christian and subsequently the European intellectual tradition. His early and influential writing on the human will, a central topic in ethics, would become a focus for later philosophers such as Schopenhauer and Nietzsche.

Augustine was canonized by popular recognition and recognized as a Doctor of the Church in 1303 by Pope Boniface VIII. His feast day is August 28, the day on which he is thought to have died. He is considered the patron saint of brewers, printers, theologians, sore eyes, and a number of cities and dioceses.

Books: *On Christian Doctrine*, 397-426, *Confessions*, 397-398, *The City of God*, begun ca. 413, finished 426, *On the Trinity*, 400-416, *Enchiridion*

At the end of his life (ca. 426-428) Augustine revisited his previous works in chronological order and suggested what he would have said differently in a work titled the *Retractions*, giving the reader a rare picture of the development of a writer and his final thoughts.

Letters: *On the Catechising of the Uninstructed*, *On Faith and the Creed*, *Concerning Faith of Things, Not Seen*, *On the Profit of Believing*, *On the Creed: A Sermon to Catechumens*, *On Continence*, *On the Good of Marriage*, *On Holy Virginitly*, *On the Good of Widowhood*, *On Lying*, *To Consentius: Against Lying*, *On the Work of Monks*, *On Patience* etc.¹²

I had been finding a reference to **Antipodes** in Augustin, “The City of God” **“He declare explicit the impossibility that Antipodes can exist .But his text offer a new key of problem:**

“But as to the fable that there are Antipodes, that is to say, men on the opposite side of the earth, where the sun rises when it sets to us, men who walk with their feet opposite ours, that is on no ground credible. And, indeed, it is not affirmed that this has been learned by historical knowledge, but by scientific conjecture, on the ground that the earth is suspended within the concavity of the sky, and that it has as much room on the one side of it as on the other: hence they say that the part which is beneath must also be inhabited. But they do not remark that, although it be supposed or scientifically demonstrated that the world is of a round and spherical form, yet it does not follow that the other side of the earth is bare of water; nor even, though it be bare, does it immediately follow that it is peopled. For Scripture, which proves the truth of its historical statements by the accomplishment of its prophecies, gives no false information; and it is too absurd to say, that some men might have taken ship and traversed the whole wide ocean, and crossed from this side of the world to the other, and that thus even the inhabitants of that distant region are descended from that one first man. Wherefore let us seek if we can find the city of God that sojourns on earth among those human races who are catalogued as having been divided into seventy-two nations and as many languages. For it continued down to the deluge and the ark, and is proved to have existed still among the sons of Noah by their blessings, and chiefly in the eldest son Shem; for Japheth received this blessing, that he should dwell in the tents of Shem.” (Augustin, *The City of God*, Book XVI, Ch. 9)¹³

Problem seems to tend true its basis: St. Augustine, for scriptural reasons, was opposed to inhabited antipodes, not a spherical earth.

¹² Extract from *The Catholic Encyclopedia*, Volume II art. “Augustin of Hippo”, and Translator’s Preface in St. Augustin’s *City of God and Christian Doctrine*, from Nicene and Post Nicene Fathers of the Christian Church, a selected library; Edited by Philip Schaff, in vol II, pp 34-39

¹³ St. Augustin’s *City of God and Christian Doctrine*, *op.cit*, p 316

Though he seemed inclined to yield a little in regard to the sphericity of the earth, he fought the idea that men exist on the other side of it, saying that "Scripture speaks of no such descendants of Adam." He insists that men could not be allowed by the Almighty to live there, since if they did they could not see Christ at His second coming descending through the air.

Antipodes which were inhabited presented scriptural problems in a number of ways.

First, there would have been no way for animals or humans of Noah's Ark to get to the Ark or to have dispersed again after the flood.

Second, all people are said to be descendants of Adam and Eve. If there were people on the other side of the earth, how did they get there?

Third, how could they have been reached with the Word of God? In Romans 10:18, "Yes verily, their sound went into all the earth, and their words unto the ends of the world." So, according to Scripture and the Church, inhabited Antipodes could not exist.

Though he seemed inclined to yield a little in regard to the sphericity of the earth, he fought the idea that men exist on the other side of it, saying that "Scripture speaks of no such descendants of Adam." He insists that men could not be allowed by the Almighty to live there, since if they did they could not see Christ at His second coming descending through the air. But his most cogent appeal, one which we find echoed from theologian to theologian during a thousand years afterward, is to the nineteenth Psalm, and to its confirmation in the Epistle to the Romans; to the words, "Their line is gone out through all the earth, and their words to the end of the world." He dwells with great force on the fact that St. Paul based one of his most powerful arguments upon this declaration regarding the preachers of the gospel, and that he declared even more explicitly that "Verily, their sound went into all the earth, and their words unto the ends of the world."

Opposition to inhabited antipodes does NOT necessary mean opposition to a spherical earth or prove flat earth thinking.. In St. Augustine's case however, it seems clear that he was not a flat earther. He definitely opposed inhabited antipodes, but gives other indications, as shown in the quotes above, that he believed the earth to be spherical (or at least was not in opposition to it).

As stated already, opposing the idea of people living on the other side of the world is not the same as promoting a flat earth.

Speculations concerning the rotundity of the earth and the possible existence of human beings "with their feet turned towards ours" were of interest to the Fathers of the Early Church only in so far as they seemed to encroach upon the fundamental Christian dogma of the unity of the human race, and the consequent universality of original sin and redemption.

This opinion of St. Augustine was commonly held until the progress of science, whilst confirming his main contention that the human race is one, dissipated the scruples arising from a defective knowledge of geography.¹⁴

Cosmas Indicopleustes Of Alexandria

Cosmas (535-547) "The Indian Voyager" was a Greek traveller and geographer of the first half of the sixth century, at Alexandria, Egypt.

Cosmas probably received only an elementary education, as he was intended for a mercantile life, and in his earlier years was engaged in business pursuits. It may be, however, that by further study he increased his knowledge, since his notes and observations show more than ordinary training.

His business took him to the regions lying south of Egypt, the farthest point of his travels in this direction being Cape Guardafui. He traversed the Mediterranean, the Red Sea, and the Persian Gulf, and gathered information about lands lying far to the East. In his later years he entered the monastery of Raithu on the Peninsula of Sinai. If it be necessary to suppose, as some investigators assert, that Cosmas was at any time a Nestorian, it would appear from his work, the "Christian Topography", that, at least towards the close of his life, he returned to the orthodox faith. In the monastery he wrote the "Topography" above mentioned, a work which gives him a position of importance among the geographers of the early Middle Ages. ¹⁵

¹⁴ Conform The Catholic Encyclopedia, art "Antipodes"

¹⁵ Extract from The Catholic Encyclopedia, art "Cosmas Indicopleustes"

The Topography contains passages which throw light on the personal history of its author, and enable us also to fix with certainty the date at which he wrote.

The commercial pursuits of Cosmas carried him into seas and countries far remote from his home. Thus he tells us that he had sailed upon three of the great gulfs which run up into the earth from the ocean, namely, the Mediterranean Sea, the Red Sea, and Persian Gulf. He sailed also upon that part of the Erythraean Sea which beyond Cape Guardafui stretches southward toward the outlying ocean, which in those days was regarded with terror and held to be unnavigable on account of the violent currents and dense and dismal fogs in which it was thought to be enveloped.

One of the most interesting and instructive parts of the Topography is that in which Cosmas relates what he had heard and seen in the course of his travels in Ethiopia. By the name of Elhiopia he designates in a general way the vast region which stretches southward from Egypt down towards the equator; and from an incidental remark which he drops when treating of the Adulitic inscription on the throne,¹⁶ we learn that he had traversed it almost throughout its length and its breadth. Like Herodotus, he was ever athirst after knowledge, and when he was unable to visit places which lay in the vicinity of his route, he made inquiries about them from such persons as knew them and could be trusted to report things truly. The capital of Ethiopia at that time was Axum, an important centre of commerce, and also of religion and learning. It was one of the places which Cosmas, in pursuit of his calling, visited, and from one or two of his statements we may infer that he was well received at Court, and was permitted by the King, who professed the Christian faith and could speak Greek, to travel freely through his dominions.

The seaport of Axum was Adule or Adulis, the modern Zulá or Thulla, situated near Annesley Bay and distant from the capital about one hundred and twenty miles or an eight days' journey. Cosmas found himself here in the year 525 A.D., at which time Elesboas, the King of Axum, was preparing an expedition against the Homerites in Arabia. Here, at the request of the Governor, Cosmas, along with his friend Menas, a monk of the monastery at Raithu, copied the famous Greek inscriptions on the marble tablet and the basanite throne, which lay together outside the town on the road which led to Axum.¹⁷

Montfaucon, in his Preface¹⁸, credits him with the discovery, in the Abyssinian province called Agau, of the true source of the Nile. It was not, however, the source of the main stream which he discovered, but that of the Blue Nile, which, a millennium afterwards, was rediscovered by the Portuguese. There was still another interesting locality which the traveller tells us he visited, and this lay on the other side of the Red Sea, the Desert, namely, of Sinai, where he found, strewn among the sands, fragments of rock covered with inscriptions which he took to have been carved by the Israelites when they were wandering in that wilderness.¹⁹

Cosmas, when all his travels were over, returned to Alexandria, perhaps after paying a visit to Jerusalem; and, abandoning the secular life, retired to the seclusion of the cloister, where he devoted his leisure to the composition of works on descriptive geography, cosmography, and Scriptural exegesis.

Christian Topography

Montfaucon entitles it: *Cosmae Egyptii Monachi Christiana Topographia, sive Christianorum Opinio de Mundo: The Christian Topography of Cosmas, an Egyptian Monk, or the Opinion of Christians concerning the World*. As Cosmas all through the work keeps harping, with the most provoking reiteration, on his doctrine that the universe consists of only two *places*, namely, the earth which is below the firmament, and heaven, which is above it, the term *Topography* designates the treatise properly enough; though on turning to peruse it for the first time, we should from its title expect its contents to be very different from what they are found to be.²⁰

The date of the work is fairly certain. In book 2, Cosmas tells us that it is 25 years since he was in Axum, and he was there when Elesbaas was preparing his expedition against the Homerites. That expedition probably took place in 525 AD, or possibly 522 AD. At the beginning of book 6, he refers to two eclipses, giving the dates

¹⁶ McCrindle, *op.cit.*, Pp. 51-53; Cosmas happened to be in Ethiopia at the time when the King of Axum was preparing a military expedition to attack Jewish Arabs in the Yemen. He records the inscriptions.

¹⁷ McCrindle, *op.cit.*, Pp. 54

¹⁸ Nova Collectio Patrum et Scriptorum Graecorum, edited by Father Montfaucon, conform McCrindle, *op.cit.*, p 20

¹⁹ McCrindle, *op.cit.*, p 159, 160

²⁰ McCrindle, *op.cit.*, Introduction p 4

as Mechir 12 and Mesori 24: these would seem to be the eclipses of 6 Feb. 547 and 17 Aug. 547. The logical inference is that the work was written around 550 AD.

The existence of the work, which had been for ages forgotten, and the importance and interest of its contents, were first made known in the latter half of the seventeenth century by Emeric Bigot. This learned French scholar, while visiting Italy, extracted from the Florentine Codex²¹ a copy of the Adulitic Inscriptions, and of passages relating to Ethiopia and India. These extracts were afterwards published in Thevenot's Relation de divers Voyages, accompanied with a translation into French. Twenty years later (1706), the work appeared in its complete form as exhibited in the Florentine Codex, collated with that of the Vatican. It was not, however, published separately, but was included in the second volume of the splendid work Nova Collectio Patrum et Scriptorum Graecorum, edited by Father Montfaucon, a Benedictine monk, celebrated for his profound knowledge of Patristic literature. The Greek text was illustrated by a learned introduction and a Latin translation of great elegance and accuracy. Notes were also added, chiefly to point out where discrepancies exist in the readings of the MSS.²² McCrindle translation has been prepared from Montfaucon's text, as reprinted in the 88th volume of the Patrologia Graeca, printed at the Migne Press, Paris, 1864.

General contents of each book of the "Topography."

To the Topography, when first published, Cosmas prefixed two prologues, in the first of which he exhorts his readers to bestow upon his works a diligent and careful perusal; and in the second, which contained the dedication to Pamphilus and apologies for his own shortcomings as a writer, he points out the nature of the contents of each of the five books of which the work then consisted. In the first book he attacks, and to his own satisfaction demolishes, the pernicious anti-Christian doctrines of the Pagan philosophy, that the world is spherical and that there are Antipodes. In the second he propounds the true theory which all Christians are bound to accept, based as it is upon the inspired Word, and maintained, besides even by some of the Pagan philosophers themselves. By the citation of measurements of the earth made from east to west and from north to south, he seeks to prove that the length of the earth is twice its breadth. In the third book he insists on the authority and harmony of Scripture, adducing many texts, which, as in the preceding book, he twists with audacious ingenuity to lend support to his own impossible theory. In the two following books he again demolishes the doctrine of the spheres, while he re-states and fortifies his own theory with a long array of additional texts.

The publication of these books, which gave definite and uncompromising expression to views of which the germs had long been vaguely floating about in the air of Christendom, produced, as might have been expected from their novelty when seen wrought together into a self-consistent system, a startling effect. Objections were urged directed especially against his views regarding the figure of the world. How, he was asked, could the sun, which was many times larger than the earth, be hidden behind the mountain in the north, however great its altitude? The sixth book was written to show that the sun, so far from being many times larger than the earth, was in point of fact only the size of two of the earth's "climates".

The seventh book, addressed to Athanasius, sought to refute a work written by a professing Christian, who held that heaven was an ever-revolving sphere, but nevertheless dissoluble. Cosmas cites and expounds numerous texts to show that the heavens cannot be dissolved, and that neither men nor angels can "enter into them until after the Resurrection. The eighth book is addressed by Cosmas to another of his friends, called Peter, who had asked him to expound the Prayer of Hezekiah. The exposition is given, and Cosmas then proceeds to show how the minds of the Babylonians had been impressed by the miraculous sign of the retrogression of the shadow upon the sun-dial and how Cyrus had been led to favour the Jews and dismiss them from their Babylonian captivity by his reading the prophecies of Isaiah which referred to himself even by name.

The ninth book, treating of the heavenly bodies, ascribes their motions to the angels, who groan under this hard and incessant toil which they perform for the benefit of man, and not for their own. They would have

²¹ Three complete manuscripts exist: 1. Rome: Vaticanus Graecus 699 (V). An uncial manuscript of the 9th century, written in Constantinople. The codex is illustrated 'magnificently'. 2. No. 1186 of the Greek Mss. of the Monastery of St. Catherine at Sinai (S). 11th century, 3. Florence: Laurentianus Plutei IX.28 (L). 11th century, written in minuscule hand.

²² McCrindle, *op.cit.*, introduction p 7

sunk, therefore, into despair, had they not seen that, even after the Fall, God was merciful and kind to man, on whose destinies their own depended. They were further encouraged when they afterwards saw that the Apostle Paul was caught up into the third heaven, and was there entertained with a glimpse of its glories.

In the tenth book Cosmas cites a number of the Fathers to show that his doctrines were in closest harmony with the teachings of the Church. In the eleventh, which is entirely geographical, he describes some animals and plants which he had seen or heard of in the course of his travels, and gives an account also of the island of Ceylon, and of its extensive commerce with India, Persia, China, and the countries of the west. The twelfth and last book shows that several of the old Pagan writers bore testimony to the antiquity of the Old Testament scriptures.

The System Of The World According To Cosmas

The system of the world according to Cosmas it is essentially controversial, its professed design being to refute, from Scripture and common sense, the impious Pagan cosmography, according to which the earth is a sphere; and the centre around which the heaven, which is also a sphere, revolves with all its luminaries. The arguments with which Cosmas seeks to demolish this theory and to illustrate his own are absurd in the extreme; and were it not for the geographical, historical, and other kinds of notices which are here and there incidentally introduced into its pages, his work would chiefly serve for amusement. According to his view, the figure of the universe can best be learned from a study of the structure and furniture of the Tabernacle which Moses prepared in the wilderness.²³ This wonderful conception did not originate with himself. Some of the Christian Fathers who preceded him had entertained it in a vague and general way, believing it might be warranted by the expression's in Hebrews, ix, 23 and 24, where the Tabernacle and its contents are said to be patterns and antitypes or figures of the true It was left to Cosmas to develop the conception and work it out into all its details. So he explains again and again that the division of the Tabernacle into two places, by means of the veil, typified the division of the universe into two worlds an upper and a lower, by means of the firmament. The table of shew-bread, again, with its waved border, represented the earth surrounded by the ocean, while its other parts and the things upon it symbolized each some object or other in the natural world. Now, as the table was twice as long as it was broad, and was placed lengthwise from east to west, and breadthwise from north to south, from this we learn that the earth is a rectangular plane which extends in length from east to west, and in breadth from north to south, and is twice as long as it is broad. The ocean, he further gives us to know, is unnavigable, and, while encompassing this earth of ours, is itself encompassed by another earth, which had been the seal of Paradise and the abode of man until the Ark, floating on the billows of the Flood, wafted Noah and his family over into this earth. The heavens come downward to us in four walls, which, at their lower sides, are welded to the four sides of the earth beyond ocean, each to each. The upper side of the northern wall, at the summit of heaven, curves round and over, till it unites with the upper side of the southern wall, and thus forms, in the shape of an oblong vault, the canopy of heaven, which Cosmas likens to the vaulted roof of a bathroom. This vast rectangular hall is divided at the middle into two stories by the firmament, which thus serves as a ceiling for the lower story and a floor for the upper. The lower story is this world, where men and angels have their abode until the Resurrection, and the story above is heaven the place of the future state. As to the position of the earth in the scheme of things, Scripture left Cosmas in no doubt. The Psalmist had declared that the Creator had founded the earth upon its own stability Job, that He had hanged it upon nothing; and Isaiah, that, while heaven was His throne, the earth was His footstool. Clearly, therefore, the place of the earth was at the bottom of the universe a position to which it must have naturally sunk (as he shows in a very curious passage) at the very instant of its creation. What then can be more absurd than the Pagan doctrine that the earth is in the middle of the universe? Were it in the middle, there must be something below it as well as above it; but there is nothing below it, since we learn from Genesis that God made heaven and earth, and nothing else beyond these. Here then the Pagans are at war with divine Scripture; but, not content

²³ Pp. 42-44, and book x, p 331. Cosmas enumerates some passages from Fathers confirming his view :

From the Festal Epistles of Athanasius, Extract from the discourse on the Passover by Gregory of Nazianzus, From first, Festal Epistle of Theophilus of Alexandria, From the first book of the Hexameron (Six days of the Creation) of Severianus, Bishop of Gabala, From the work of Epiphanius, Bishop of Cyprus, On Measures and Weights, From the work on Alms by John Chrysostom, From the Commentary by the same on the Epistle to the Ephesians, From the Commentary on Canticles, by Philon Bishop of Carpathus, From Theodosius, Bishop of Alexandria-On the fortieth day of the Ascension of the Lord

with this, they are at war also with common sense itself and the very laws of nature, declaring, as they do, that the earth is a central sphere, and that there are Antipodes, who must be standing head-downward and on whom the rain must fall up.

The theory by which Cosmas accounts for the vicissitudes of day and night is no less preposterous than his idea of the figure of the world. The Pagan theory that the earth is spherical and placed in the centre of the universe, with the heavenly bodies revolving round it, accounted satisfactorily for the disappearance of the sun during the night; but where could Cosmas, in whose philosophy there was neither a spherical earth nor any under-world, find a place for the great orb of light when no longer visible? The problem did not baffle his ingenuity. Calling to his aid the words of Solomon, which declared that the sun on rising turned first towards the south and then towards the north, where he went down, and thence hastened to the place in which he arose, he made them the basis of the following extraordinary theory. The earth, he tells us, gradually rising up from the south, extends westward, until it culminates at last in a huge conical mountain situated somewhere in the far-away frozen north. Behind this immense cone, the sun at the close of day disappears from view, and leaves the world which we inhabit in darkness, until, having circled round the cone, he reappears in the east to give birth to a new day. According, moreover, as he is high or low during his nocturnal revolution, the nights vary in their length; while, owing to a slight obliquity in his motion, eclipses are produced. On the question of the magnitude of the great luminary Cosmas differed widely from the Pagan philosophers, and wrote his sixth book mainly to prove that, instead of its being, as they thought, many times larger than the earth, it was no more than the size of two only of the earth's climates or zones, those between the latitudes of Alexandria and Rhodes, and Rhodes and Constantinople, an extent of about 635 geographical miles.²⁴ But the words of Solomon form by no means the only Scriptural warrant for taking this view of the order of nature, for the candlestick placed on the south of the table of shew-bread typified the sun shining upon the earth from the south towards the north, while the waved border which ran round the table typified the ocean surrounded by the outer earth, both of which were illuminated by the sun while circling round the gigantic mountain²⁵

The Pagan theory which Cosmas especially detested, and made most frequently the subject of his scornful and violent invective, was that which maintained that the heavens were spherical and in constant revolution. He heaps text upon text to confute the advocates of this most pestilent doctrine, which, if admitted, would, he contended, abolish the future state and make the resurrection of Christ of no account.

But while Cosmas regarded as impious the doctrine that the heavens revolve, he admitted the revolution of the celestial luminaries, which, he held, were propelled in their courses by the angels, who do not live in heaven but are restricted to the aerial spaces below the firmament, until the resurrection.

All these and other views, though interesting, Cosmas states and re-states with the most wearisome pertinacity, and holding them to be most vital verities, sanctioned alike by common sense and the paramount authority of divine Scripture, denounces again and again "those reprobate Christians who, instead of accepting them, prefer, through their perverse folly or downright wickedness, to adopt the miserable Pagan belief that earth and heaven are spherical, and that there are Antipodes on whom the rain must fall up.

The maps and sketches which illustrate the views of Cosmas.

Topography contains in all probability the oldest Christian maps that have survived. There is little reason to doubt that the numerous sketches, which are to be found in the Florentine manuscript of the tenth century were really drawn by Cosmas himself (or under his direction) in the sixth; and are thus at least two centuries earlier than the Map of Albi, or the original sketch of the Spanish monk Beatus²⁶.

Analyze Of Cosmas Work

As Beazley sustain "much of medieval European cartography and geography is reflected and exemplified by the work of Cosmas of Alexandria. During this time cartography was heavily "Christianized" as evidenced by the many religious themes and references incorporated in and even dominating many of the surviving maps from the Middle Ages. The rejecting of 'classical' geography and the impetus and rationale for this theocratic

²⁴ McCrindle, *op.cit.*, pp. 251-2

²⁵ McCrindle, *op.cit.*, pp. 40-43 and 322-4.

²⁶ Conform Beazley, C., *The Dawn of Modern Geography*, volume I, p.64

trend, while not originating with Cosmas, was synthesized and exaggerated in his works. Both philosophically and cartographically Cosmas' ideas were strictly dictated by his literal interpretation of the Bible. Cosmas' personal history, however, is rather contradictory to his later narrow interpretation of geography because he was originally a traveling merchant by profession. He claimed to have sailed the Red Sea and the Indian Ocean, trading at the market places of Abyssinia and Socotia, western India and Ceylon, among others. This extensive travel can be substantiated through examination of his detailed description of these areas. As a climax to this unusually broad and worldly experience Cosmas embraced Christianity, going so far as to become a monk to demonstrate the depth of his conversion"²⁷.

Unfortunately, the book which he devoted to a description of countries, and which would have revealed his fine powers of observation, has not survived, like all of his other works - his Astronomical Tables, Commentaries on the Psalms, on the Song of Songs, and on the Gospels. Some of his geographic descriptions are to be found as part of the Topographia, and a few fragments of the above writings do exist.

The Christian Topography contains references to nearly seventy authorities selected from among philosophers, historians, travellers, doctors of the Church, soldiers, and statesmen. Cosmas' primary objective and motivation in writing the treatise was to discredit the "false and heathen doctrine of a spherical earth". This he accomplishes with reprehensible religious zeal in the first book [chapter]. In order to disprove the pagan writers with such stature as Plato, Aristotle, Strabo, Pythagoras, Eudoxus, Pytheas of Marseilles, Ptolemy, Eratosthenes, and many others, Cosmas used two very effective weapons: the words of God and "common sense".

In subsequent Books (II-XII) he fulfills his secondary objective, that of revealing the "true doctrine" of the universe and the earth's place in it, as defined by Cosmas' interpretation of the Scriptures, confirmed by the Church Fathers (Book X) and even non-Christian sources (Book XII).

In addition to the above mentioned classical/pagan writers, Cosmas also takes issue with fellow Christian writers, such as Saint Basil, Origen and others who either avoided the controversy of a spherical earth or argued on the side of the pagan scientists. Some of his fellow Christian writers openly declared that it did not matter so far as faith was concerned whether the earth was a sphere, a cylinder or a disc. But this sort of rationalizing was not good enough for Cosmas. God had once explained to Moses on Mount Sinai exactly how the Tabernacle was to be built, and when it was found in the writings of Saint Paul that there was a passage which could be interpreted to mean that the Tabernacle was a picture of the world, it was quite natural for the Church Fathers to envision the world as a vast tabernacle: a tent with a rectangular base, twice as long as it was broad, and with an arched roof supported by four pillars. Both prophets and apostles, says Cosmas, agree that the Tabernacle was a true copy of the universe, the express image of the visible world.

Using this biblical passage by the Apostle Paul (Hebrews IX:1-2) which declares that the first Tabernacle was a pattern of this world, for the first "had ordinances of divine service and a worldly sanctuary; for there was a tabernacle made; the first wherein was the candlestick and the table and the shewbread, which is called the Sanctuary"²⁸. Cosmas undertakes, with much else, to explain the symbolism of that Tabernacle in detail. In calling it worldly, Cosmas explained, St. Paul was indicating a sort of pattern of the world; the candlestick represents the luminaries of the heavens (sun, moon, stars); the table was an analogy to the earth itself and the shew-bread symbolized the fruits produced from the world. The same logic was applied by Cosmas in his conception of the shape of the world, for the Scripture said "thou shalt make the table in length two cubits and in breadth one cubit" (Exodus XXXVII:10). This indicated to Cosmas that the earth was flat and twice as long, from east to west, as it was broad. Moreover, the earth was suspended, as Job said (Job XXXVIII:38), on nothing, but was founded on God's stability.

The heavens come downward to us in four walls, which, at their lower sides, are welded to the four sides of the earth beyond ocean, each to each. The upper side of the northern wall; at the summit of heaven, curves around and over, till it unites with the upper side of the southern wall, and thus forms, in the shape of an oblong vault, the canopy of heaven, which Cosmas likens to the vaulted roof of a bathroom.

This great dome is divided into two strata by the firmament; from the earth to the firmament is the present dispensation of angels and men containing the land, the sea and the inhabitants of the world, with the angels hovering close to the "roof" holding the sun, moon and stars which they controlled. In the second storey, from

²⁷ Beazley, *op.cit.*, P 46

²⁸ McCrindle, *op.cit.*, p 150,

the firmament to the arch of the second heaven, was to be found the kingdom of the blessed (the saints and angels) and enthroned at the top was Christ himself. From some passages in Book IX it may be inferred that Cosmas estimated the distance from the earth to the firmament as double the distance from the firmament to the summit of the Upper Heaven.

“The sun”, said Cosmas via Solomon, “on rising, turns first toward the north, where it went down, and thence hastened to the place in which it arose”. The earth, he tells us, gradually rising up from the south, extends westward, until it culminates at last in a huge conical mountain situated somewhere in the far-away frozen north. Behind this immense cone, the sun at the close of the day disappears from view, and leaves not only the world which we inhabit in darkness, but is the source of darkness “even to the ocean beyond our earth, and thence to the land on the other side of our ocean,” until, having circled round the cone, it reappears in the east to give birth to a new day. These facts were “proved” by the furniture of the Tabernacle. Here the candlestick, placed to the south of the table of shew-bread, typified the heavenly bodies shining on the earth; the molding that Moses put around the table of shew-bread signified the ocean encompassing our present world; and by a “crown of palm’s width” beyond the molding, was indicated the former world of the patriarchs on the other side of the ocean, where man lived before the flood.

In all this Cosmas passed beyond the position of most of the theologians such as Lactantius who preceded him. Where they had only denied, he affirmed, and affirmed with definitiveness. The faithful Christian in earlier times had been content to doubt or dispute the theory of a round world, and the monstrous fallacies such as the Antipodes associated with this pagan error; but, until Cosmas, they were never offered a clear alternative - God’s word for man’s. The system extrapolated by Cosmas was constructed from the Scriptures and no ‘true Christian’ could doubt such a source as this.

To illustrate this interpretive description of the earth and the universe, the Christian Topography contains, in all probability, the oldest Christian maps to have survived. There is little doubt among scholars that the numerous sketches - of the world, of the northern mountains, of the Antipodes in derision and the rest - which are to be found in the 10th century Florentine manuscript copy were really drawn by Cosmas himself (or under his direction) during the 6th century; and are thus contemporary with the Madaba mosaic map and at least two centuries earlier than the map of Albi, or the original sketch of the Spanish monk Beatus.²⁹

The world, as expressed by Cosmas on one of his diagrammatic maps shown here, is of course rectangular and flat, and is divided into two parts: present and antediluvian. The central part of the rectangular landmass (the present) is surrounded by a likewise rectangular unnavigable Oceanus which, in turn, is surrounded by another earth or borderland, Terra ultra Oceanum, in which the Paradise of Adam was located and “where men lived before the Flood”. Located in the eastern portion of this antediluvian ‘borderland’ or Paradise can be found a large rectangular lake, and from this the ‘four sacred rivers’ flow, somehow, through or under the Oceanus to the inhabited present world.

Of these the Pheisôn [Pison] is the river of India, which some call the Indus or Ganges. It flows down from regions in the interior, and falls by many mouths into the Indian Sea, enjoying all of the same products as the Nile, from crocodiles to lotus flowers ... The Geôn [Gihon or Nile] again, which rises somewhere in Ethiopia and Egypt, and discharges its waters into our gulf by several mouths, while the Tigris and Euphrates, which have their sources in the regions of Parsarmenia, flow down to the Persian Gulf ...

Cosmas’ map also contains the four great seas or gulfs: the Mediterranean, Persian, Arabian and Caspian; along with obvious graphic references to the Black and Adriatic Seas. The Mediterranean tapers off sharply in the west before it empties into the Oceanus and the Caspian is still perpetuated as a bay of the encircling ocean. According to Cosmas, the four ‘corners’ or extremes of the world are occupied by four nations [i.e., races of man]. In the east are the Indians, in the south the Ethiops, in the west the Celts and in the north the Scythians. But their regions are not of equal extent. As the world is an oblong, and the length of it is from east to west, the nations dwelling upon these sides have a far wider range than those which are placed at the two ends. The Scythians occupy what is left over from the course of the sun (i.e., the North); the Ethiopians over against them extend from the “Winter East to the Shortest West”.

Concerning the dimensions of the world Cosmas writes: “for if, on account of a miserable trade, men now try to go to the Seres, would they not much rather go far beyond, for the sake of Paradise, if there were any hope

²⁹ Harley, J.B., *The History of Cartography*, Volume One, pp. 222

of reaching it?" The Seric or Silk Land, indeed, lay in the most distant recesses of India, far past the Persian Gulf, and even past the island of Ceylon. It was also called Sina [Malaya?], and just as Barbary or Somaliland had the ocean on its right, so this remote country was washed by the ocean on the left. And so the Brahmin philosophers declared that if you stretched a cord from Sina, through Persia, to the Roman Empire, you would exactly cut the world in half.

"Moreover, for as much as beyond Sina on the east, and beyond Cadiz on the west, there is no navigation, it is between these points that we can best measure the length of the world;" just as from the land of the Hyperboreans "living behind the north wind," and from the Caspian, that flows in from the Arctic waters, to the Southern Ocean and the extremest coasts of Ethiopia, one may estimate the breadth. The first will be found to be about 400 stages; the second about 200. Specifically, the breadth - from the Northern Ocean to Byzantium, 50 stages; from Byzantium to Alexandria, 50 stages; from here to the Cataracts, 30 stages; from here to the area called Axum, 30 stages; and from here to the incense-bearing coast of Barbary, a district called Sasou, about 50 stages. The length - from Sina to Persia, 150 stages; from here to the Roman Empire, at Nisbis, 80 stages; from here to Seleucia, 13 stages; and to Cadiz more than 150 stages.³⁰

Cosmas, like all good Christian geographers, shrank from the idea of an inhabited part of the world in the Antipodes, separated from Christianity by an ocean belt near the equator. The theory of such a region, found in some of the pagan writings of the early Greeks and later by the likes of Macrobius, Isidore and other perpetrators of pagan thought, was impossible, according to Cosmas, on two counts.

In the first place, the region, if indeed there was land there, would be uninhabitable because of the withering heat.

In the second place, the inhabitants could not possibly be descended from Adam, since the Ark of Noah carried the sole survivors of the great Flood.³¹

Cosmas was most emphatic on the subject. Pagans, he said, "do not blush to affirm that there are people who live on the under surface of the earth. But should one wish to examine more elaborately the question of the Antipodes, he would easily find them to be old wives' fables. For if two men on opposite sides placed the soles of their feet each against each, whether they chose to stand on earth or water, on air or fire, or any other kind of body, how could both be found standing upright? The one would assuredly be found in the natural upright position, and the other, contrary to nature, head downward. Such notions are opposed to reason and alien to our nature and condition."

In support of the same truth, Cosmas quotes the added testimony of Abraham, David, Hosea, Isaiah, Zachariah and Melchizedek, who clenched the case against the Antipodes - "For how, indeed, could even rain be described as 'falling' or 'descending' in regions where it could only be said to 'come up'?" Over against these disproofs of folly and error stands the countless array of evidences for the true tabernacle theory, for the flatness and immutability of earth, founded upon God's stability, and for the shape of heaven, stretched like a skin-covering over our world, and glued to the edges of it at the horizon.

The seat of the terrestrial Paradise

Cosmas explains again and again that the division of the Tabernacle into two places, by means of the veil, typified the division of the universe into two worlds an upper and a lower, by means of the firmament. The table of shew-bread, again, with its waved border, represented the earth surrounded by the ocean, while its other parts and the things upon it symbolized each some object or other in the natural world. Now, as the table was twice as long as it was broad, and was placed lengthwise from east to west, and breadthwise from north to south, from this we learn that the earth is a rectangular plane which extends in length from east to west, and in breadth from north to south, and is twice as long as it is broad. The ocean, he further gives us to know, is unnavigable, and, while encompassing this earth of ours, is itself encompassed by another earth, which had been the seat of Paradise and the abode of man until the Ark, floating on the billows of the Flood, wafted Noah and his family over into this earth. The heavens come downward to us in four walls, which, at their lower sides, are welded to the four sides of the earth beyond ocean, each to each.

³⁰ Christian Topography, Book 2; McCrindle, *op.cit.*, pp 49-52

³¹ Christian Topography, Book 1; McCrindle, *op.cit.*, pp 17-19

The idea of Cosmas is that this earth which we inhabit is surrounded by the ocean, but that beyond the ocean there is another earth which on every side encompasses the ocean, and which had been formerly the seat of Paradise. It was this earth whose extremities were fastened together with the extremities of heaven.

*"We have said that the figure of the earth is lengthwise from east to west, and breadthwise from north to south, and that it is divided into two parts: this part which we, the men of the present day, inhabit, and which is all round encircled by the intermedial sea, called the ocean by the Pagans, and that part which encircles the ocean, and has its extremities bound together with those of the heaven, and which men at one time inhabited to eastward, before the flood in the days of Noah occurred, and in which also Paradise is situated."*³²

*"Now the divine Apostle in the epistle to the Hebrews, in explaining the inner Tabernacle, or that which was within the veil, declares that it was a pattern of the heavenly that is, of the kingdom of the heavens or the future state, taking the veil which divides the one Tabernacle into two for the firmament; just as the firmament placed in the middle, between the heaven and the earth, has made two worlds this world namely, and that which is to come, into which world to come the first who entered was the forerunner on our behalf, Christ, who thus prepared for us a new and living way. Now in his description of the first Tabernacle, Moses places in the south of it the candlestick, with seven lamps, after the number of days in the week these lamps being typical of the celestial luminaries and shining on the table placed in the north of the earth. On this table again he ordered to be daily placed twelve loaves of shewbread, according to the number of the twelve months of the year three loaves at each corner of the table, to typify the three months between each of the four tropics. He commanded also to be wreathed all around the rim of the table a waved moulding to represent a multitude of waters, that is, the ocean; and further, in the circuit of the waved work, a crown to be set of the circumference of the palm of the hand, to represent the land beyond the ocean, and encircling it, where in the east lies Paradise, and where also the extremities of the heaven are bound to the extremities of the earth. And from this description we not only learn concerning the luminaries and the stars that most of them, when they rise, run their course through the south, but from the same source we are taught that the earth is surrounded by the ocean, and further that beyond the ocean there is another earth by which the ocean is surrounded".*³³

The place of Cosmas in history

The place of Cosmas in history has been sometimes misconceived. No scholar admits that his works had any major impact or traceable influence on medieval geographical thought.³⁴ For, on the whole, its influence is only slightly, and occasionally, traceable. Its author stated his position as an article of Christian faith; but even in those times there was anything but a general agreement with his didactic conclusions. The subtleties of Cosmas were left to the Greeks, for the most part; the western geographers who pursued his line of thought were usually content to stop short at the merely negative dogmas of the Latin fathers; and no great support was given to the constructive tabernacle-system of the Indian merchant.

Yet, after all, the Christian Topography will always be remarkable for other than the intended purposes. It represents perhaps the final warning of a certain habit of mind, of that religious dogmatizing which fears nothing but want of faith. Quite apart from the genuinely useful notes that it contains of commercial and missionary travel, it is also one of the earliest important essays in scientific or strictly theoretic geography, within the Christian era, written by a Christian thinker. It is extraordinary that Cosmas should have really done some work in astronomy, and yet should have denied every lesson that astronomy teaches and nearly every assumption on which its progress has been based, yet so stand the facts; and in the Topography we have to deal, not with a mere fabulist like Solinus, still less with a servile statistician or tabulator, but with a bold and independent cosmographer. Had he not set out with the purpose of making facts conform to pre-judgements and forcing the heavens to tell the glory of God, Cosmas might have advanced the science that he set himself the task to overthrow. But it was this very destructive purpose that led him to write. He recognized

³² McCrindle, *op.cit.*, p 31

³³ McCrindle, *op.cit.*, p44

³⁴ Beazley, C., *The Dawn of Modern Geography*, volume I, pp. 273-303, Russell has a similar position: Jeffrey Russell, *Inventing the flat earth: Columbus and modern historians*.

no good in knowledge apart from the word of the Scriptures; and the observations which are to be found like fossils scattered among the layers of his arguments are, in part, merely to illustrate the latter, and, in part, as we mentioned, are probably taken from his other treatise. In the *Topography* Cosmas was mainly interested in constructing a theological system of the universe: never before or since was so complete and so ambitious an attempt made in this direction; but considerable knowledge, many opportunities, and some education were here allied to fervent piety. It was not because of ignorance or through living in the "Dark Ages" that Cosmas wrote as he did. He flourished at the time when Christianity perhaps most entirely and exclusively controlled a major area of the civilized world; and he seems conscious, not of a feeble and barbarized mind, but rather of having all knowledge for his province. He was not without profane science, but he now saw it (and saw through it) in the light of theology, the crown of sciences.

With regard to the place which Cosmas holds in history, we cannot do better than cite the estimate expressed by the same writer (Beazley), whose wide and accurate knowledge of mediaeval literature enables him to speak *ex cathedra* on the subject. "Cosmas," he says, "is of interest to us as the last of the old Christian geographers, and in a sense, too, the first of the mediaeval. He closes one age of civilization which had slowly declined from the self-satisfied completeness of the classical world, and he prepares us to enter another that, in comparison, is literally dark. From the rise of Islam the geographical knowledge of Christendom is on a par with its practical contraction and apparent decline. Even more than actual exploration, theoretical knowledge seemed on its death-bed for the next five hundred years"³⁵. In a subsequent passage dealing with the same topic, he says: "The place of Cosmas in history has been sometimes misconceived. His work is not, as it has been called (in the earlier years of this century), the chief authority of the Middle Ages in geography. For, on the whole, its influence is only slightly, and occasionally, traceable. Its author stated his position as an article of Christian faith, but even in those times there was anything but a general agreement with his positive conclusions. The subtleties of Cosmas were left to the Greeks, for the most part; the western geographers who pursued his line of thought were usually content to stop short at the merely negative dogmas of the Latin Fathers; and no great support was given to the constructive tabernacle system of the Indian merchant. Yet, after all, the Christian *Topography*. must always be remarkable. It is one of the earliest important essays in scientific or strictly theoretic geography, within the Christian aera, written by a Christian thinker"³⁶ Mr. Beazley concludes his long notice of the great Christian Cosmographer in these terms: "He felt himself to be the apostle of full supernatural theory in science. He knew that his work was unique. And such it has always been recognised by some with rapture, by others with consternation, by most with derision. At least it is a monument of infinite, because quite unconscious, humour. 'For neither before him was any like unto him, neither shall be after.'"

In short, he gives us a window into a fascinating world of which we would otherwise know nothing.

St. Isidore of Seville (600-636 AD)

Isidore of Seville was born at Cartagena, Spain, about 560; died 4 April, 636.

Isidore was the son of Severianus and Theodora. His elder brother Leander was his immediate predecessor in the Metropolitan See of Seville; whilst a younger brother St. Fulgentius presided over the Bishopric of Astigi. His sister Florentina was a nun, and is said to have ruled over forty convents and one thousand religious.

Isidore received his elementary education in the Cathedral school of Seville. In this institution, which was the first of its kind in Spain, the trivium and quadrivium were taught by a body of learned men, among whom was the archbishop, Leander. With such diligence did he apply himself to study that in a remarkably short time mastered Latin, Greek, and Hebrew. Whether Isidore ever embraced monastic life or not is still an open question, but though he himself may never have been affiliated with any of the religious orders, he esteemed them highly. On his elevation to the episcopate he immediately constituted himself protector of the monks. In 619 he pronounced anathema against any ecclesiastic who should in any way molest the monasteries.

On the death of Leander, Isidore succeeded to the See of Seville.

Leander was a man of perhaps greater force than Isidore himself.³⁷ Born at Cartagena, he became a monk, and later, bishop of Seville. He was the chief leader of the orthodox party in its struggle against "the Arian

³⁵ Beazley, C., *The Dawn of Modern Geography*, volume I, pp.33

³⁶ idem, p. 283.

³⁷ Brehaut Ernest, *An Encyclopedist of the Dark Ages: Isidore of Seville*, p 21

insanity”, and in the heat of the conflict was obliged to absent himself from Spain for a time. He visited Constantinople and there became the friend of Gregory the Great. Returning to Spain, we find him, under king Reccared in 587, presiding over the council of Toledo, at which the Visigothic kingdom turned formally from Arianism. Leander was a man of action rather than a writer, but according to Isidore he engaged in controversy with the heretical party, “overwhelming the Arian impiety with a vehement pen and revealing its wickedness”. He wrote also a little book, which we still have, “On the training of nuns and contempt for the world”, and contributed music and prayers to the church service. There seems to be no doubt that Leander was the foremost churchman of his time in Spain. The prestige of his name must have made it easier for his successor, Isidore, to devote himself to the intellectual rather than to the administrative leadership of the church.

His long incumbency to this office was spent in a period of disintegration and transition. The ancient institutions and classic learning of the Roman Empire were fast disappearing. In Spain a new civilization was beginning to evolve itself from the blending racial elements that made up its population. For almost two centuries the Goths had been in full control of Spain, and their barbarous manners and contempt of learning threatened greatly to put back her progress in civilization. Realizing that the spiritual as well as the material well-being of the nation depended on the full assimilation of the foreign elements, St. Isidore set himself to the task of welding into a homogeneous nation the various peoples who made up the Hispano-Gothic kingdom. To this end he availed himself of all the resources of religion and education. His efforts were attended with complete success. Arianism, which had taken deep root among the Visigoths, was eradicated, and the new heresy of Acephales was completely stifled at the very outset; religious discipline was everywhere strengthened. Like Leander, he took a most prominent part in the Councils of Toledo and Seville. In all justice it may be said that it was in a great measure due to the enlightened statecraft of these two illustrious brothers the Visigothic legislation, which emanated from these councils, is regarded by modern historians as exercising a most important influence on the beginnings of representative government. Isidore presided over the Second Council of Seville, begun 13 November, 619, in the reign of Sisebut. But it was the Fourth National Council of Toledo that afforded him the opportunity of being of the greatest service to his country. At this council, begun 5 December, 633, all the bishops of Spain were in attendance.

St. Isidore, though far advanced in years, presided over its deliberations, and was the originator of most of its enactments. It was at this council and through his influence that a decree was promulgated commanding all bishops to establish seminaries in their Cathedral Cities, along the lines of the school already existing at Seville. Within his own jurisdiction he had availed himself of the resources of education to counteract the growing influence of Gothic barbarism. His was the quickening spirit that animated the educational movement of which Seville was the centre. The study of Greek and Hebrew as well as the liberal arts, was prescribed. Interest in law and medicine was also encouraged. Through the authority of the fourth council this policy of education was made obligatory upon all the bishops of the kingdom. Long before the Arabs had awakened to an appreciation of Greek Philosophy, he had introduced Aristotle to his countrymen. He was the first Christian writer to essay the task of compiling for his co-religionists a summa of universal knowledge. This encyclopedia epitomized all learning, ancient as well as modern. In it many fragments of classical learning are preserved which otherwise had been hopelessly lost. The fame of this work imparted a new impetus to encyclopedic writing, which bore abundant fruit in the subsequent centuries of the Middle Ages. His style, though simple and lucid, cannot be said to be classical. It discloses most of the imperfections peculiar to all ages of transition. It particularly reveals a growing Visigothic influence. Arevalo counts in all Isidore's writing 1640 Spanish words.

Isidore was the last of the ancient Christian Philosophers, as he was the last of the great Latin Fathers. **He was undoubtedly the most learned man of his age and exercised a far-reaching and immeasurable influence on the educational life of the Middle Ages.** His contemporary and friend, Braulio, Bishop of Saragossa, regarded him as a man raised up by God to save the Spanish people from the tidal wave of barbarism that threatened to inundate the ancient civilization of Spain, The Eighth Council of Toledo (653) recorded its admiration of his character in these glowing terms: “The extraordinary doctor, the latest ornament of the Catholic Church, the most learned man of the latter ages, always to be named with reverence, Isidore”. This tribute was endorsed by the Fifteenth Council of Toledo, held in 688.³⁶

³⁶ Extract from: The Catholic Encyclopedia, art. “St. Isidore of Seville” and from Philip Schaff, History of the Christian Church, vol.IV, pp 404-408

Isidore's work³⁹

As a writer, Isidore was prolific and versatile to an extraordinary degree. **His voluminous writings may be truly said to constitute the first chapter of Spanish literature.**

His few remaining letters, written in the stilted religious phraseology of the day, give the impression that he was much consulted on ecclesiastical and political matters, and that he held a position of primacy among the Spanish bishops; but on the whole they contain remarkably little that is of personal interest. From the records of the councils we learn that he presided at the second council of Seville in 619, and probably also at the fourth of Toledo in 633. According to a contemporary account written by a cleric named Redemptus, he died in April of 636. No other details of importance are known about his life. His career must have been a placid and uneventful one, and evidently much of his time was spent on his voluminous writings, which were the means by which he won his great ascendancy over the minds of his contemporaries⁴⁰.

Perhaps the most reliable account of the impression which Isidore made on the men of his own time is given in the somewhat ponderous Introduction to his works furnished by his friend and correspondent, Braulio, bishop of Saragossa:⁴¹

"Isidore, a man of great distinction, bishop of the church of Seville, successor and brother of bishop Leander, flourished from the time of Emperor Maurice and King Reccared. In him antiquity reasserted itself—or rather, our time laid in him a picture of the wisdom of antiquity: a man practiced in every form of speech, he adapted himself in the quality of his words to the ignorant and the learned, and was distinguished for unequalled eloquence when there was fit opportunity. Furthermore, the intelligent reader will be able to understand easily from his diversified studies and the works he has completed, how great was his wisdom. ..."

For the present purpose the **Etymologiae** is, of course, of prime importance, since it contains in condensed form nearly everything that Isidore has written elsewhere. A passing attention, however, should be given to some of his other works, especially those of the more secular sort, in which his characteristic ideas are frequently developed with greater fullness than in the *Etymologies* itself. These include in particular **the Differentiae, the De Natura Rerum, the Liber Numerorum, the Allegoriae, the Sententiae, and the De Ordine Creaturarum.**

The Differentiae is in two books, the first of which treats of differences of words, and the second, of differences of things. The plan of the first book is alphabetical; words are ranged in pairs and distinguished from each other. Usually these words are synonyms, and directions are given for their proper use; as, *populus* and *plebs*, *recens* and *novus*, *religio* and *fides*; but frequently words of similar sound are distinguished; as, *vis* and *bis*, *hora* and *ora*, *hos* and *os*, *marem* and *mare*

The De Natura Rerum is a work of great importance for an understanding of Isidore's view of the physical universe. The preface is of especial interest as giving some hints of his methods of literary work and of his attitude toward pagan writers. It is addressed to Sisebutus, who was king of the Visigoths from 612 to 620.⁴² It runs as follows:

"Although, as I know, you excel in talent and eloquence and in the varied accomplishments of literature (*vario flore literarum*), you are still anxious for greater attainment, and you ask me to explain to you something of the nature and causes of things. I, on my part, have run over the works of earlier writers, and am not slow to satisfy your interest and desire, describing in part the system of the days and months; the goals of the year, as well, and the changes of the seasons; the nature also of the elements; the courses of the sun and moon, and the significance of certain stars; the signs of the weather, too, and of the winds; and besides, the situation of the earth, and the alternate tides of the sea. And setting forth all things as they are written by the ancients, and especially in the works of catholic writers, we have described them briefly. For to know the nature of

³⁹ extract from Ernest Brehaut, *op. cit.*, pp 24-34

⁴⁰ conform Ernest Brehaut, *op.cit.*, p 79: Contemporary sources for Isidore's life are: the passage in the *regula* of his brother Leander (Migne, P. L. 72, col.892); the correspondence of Isidore (Migne, P. L., 83, col. 893); Braulio's Introduction to Isidore's works Migne, P. L. 82, col. 65); the life of Isidore given by Ildephonsus, bishop of Toledo (d. 667) in his continuation of Isidore's *De Viris Illustribus*; and the letter of the clerk Redemptus, describing Isidore's death (Migne, P. L. 82, col. 68).

⁴¹ *Sancti Braulionis, Caesaraugust. episcopi Praenotatio librorum Isidori*, Migne, P. L. 82, col. 65. conform Ernest Brehaut, *op.cit.*, p 86

⁴² Isidore describes this ruler in his *History of the Goths* as *scientia literarum magna ex parte imbutus*. See Migne, P. L.83, col. 1073. conform Brehaut, *op.cit.*, p 42

these things is not the wisdom of superstition, if only they are considered with sound and sober learning.

...⁴³

The general organization of the matter treated by Isidore in the *De Natura Rerum* is worth noticing.⁴⁴ The preface quoted above indicates that the order of treatment is to follow the order of creation. The first topic, therefore, suggested by the creation of light, we should expect to be the phenomenon of light. Instead of this it is the day, in the calendar sense, that is described, with the natural sequel of the week, month, and year as collections of days. This section really constitutes a brief account of the elements of chronology. Next created are the heavens; so we have next astronomy, presented in a condensed form, to which are appended a few chapters on meteorological matters, such as thunder, clouds, the rainbow, wind, and finally pestilence, which comes in appropriately here as being "a corruption of the air". The topic next in order, following the first chapter of Genesis, is the sea; and after that, the dry land. It should be noted that this view of the physical universe according to the order of its creation, corresponds roughly to the analysis of matter into the four elements, fire, air, water, earth. As will be shown later, such correspondences are an important factor in the intellectual outlook of the time. This was the kind of mental connection with which people were familiar⁴⁵.

The Liber Numerorum contains nothing arithmetical in the modern sense of the word, in spite of Braulio's statement that in it Isidore "touched on the science of arithmetic".⁴⁶ Its fuller title is "The book of the numbers which occur in the Holy Scriptures", and the body of the book is taken up with the mystic significance of each number from one to twenty, omitting seventeen, and also of twenty-four, thirty, forty, forty-six, fifty, and sixty. The method of treatment indicates an advanced mysticism of numbers. The book is not so much an attempt to show the significance of numbers occurring in particular connections, as it is a generalized guide to their mystical interpretation, laying down rules to govern the interpretation of each number, no matter where it occurs. It should be remarked that this was really "the science of number" of the dark ages, and that

Braulio's use of the term "arithmetic" as applying to it was in accordance with the best usage of the time.⁴⁷

The Allegoriae is of a character similar to the *Liber Numerorum*. It contains in brief form the principal allegories which were read into the books of the Old and the New Testaments, and is evidently meant to constitute a sort of reference book for Scriptural allegory.

One of the most important of the writings of Isidore is **the Sententiae**, in three books. It is a systematic treatise on Christian doctrine and morals, and is culled chiefly from the *Moralia* of Gregory the Great⁴⁸. As might be guessed from its source, it is not a work of an enlightened character. However, while it is largely taken up with the technicalities of Christian thinking, it is frequently valuable as affording fuller and more specific statements on some matters of interest than are found elsewhere in Isidore's works.

Among Christian scholars from the beginning there had been a desire to bring the traditional ideas of pagan cosmography into subordination to the Christian scheme. This impulse was strongly, though blindly, felt by Isidore, and it led to his several attempts at a comprehensive account of the universe. Perhaps the most interesting of these is the *De Ordine Creaturarum*, which differs from the others by including the spiritual as well as the material universe. The difference did not make for rationality, and in this short work

Isidore is seen at his scientific worst. As in the *De Natura Rerum*, the dominating factors in the description of the physical universe are the first chapter of Genesis and the theory of the four elements.

Etymologiae

That one of Isidore's books which is of by far the greatest importance for an understanding of the secular thought of the day, is the *Etymologies*. This is a sort of dictionary or encyclopedia of all knowledge. As Braulio puts it, it contained "about all that ought to be known", and it may be taken as representing the widest possible scope of secular knowledge that an orthodox Spaniard of the dark ages could allow himself.

⁴³ Brehaut, *op.cit.*, p 15

⁴⁴ Brehaut, *op.cit.*, p.15-16

⁴⁵ *Ibidem*, p. 64

⁴⁶ *Ibidem*, p 24

⁴⁷ *Ibidem* p 34

⁴⁸ *Ibidem* p 16

Indeed, so hospitable an attitude toward profane learning as Isidore displayed was unparalleled in his own period, and was never surpassed throughout the middle ages.

The encyclopedic character of the *Etymologies* may best be realized by a general view of its contents.

To the modern reader, familiar with the names of only the modern sciences, this series of titles, which includes an almost complete list of the ancient sciences, may not be very illuminating. For this reason it is perhaps allowable to translate them, where it is possible to do so, into their modern equivalents. Thus we have grammar (Bk. 1), rhetoric and logic (Bk. 2), arithmetic, geometry, music, astronomy (Bk. 3), medicine (Bk. 4), law and chronology (Bk. 5), theology (Bks. 6-8), human anatomy and physiology (Bk. 11), zoology (Bk. 12), cosmography, and physical geography (Bks. 13-14), architecture and surveying (Bk. 15 and part of Bk. 19), mineralogy (Bk. 16) agriculture (Bk. 17), military science (Bk. 18). This partial enumeration of the subjects treated in Isidore's *Etymologies* forms an imposing array, and serves to explain something of the importance of the work in the history of thought.

The secret of this inclusiveness lay, however, not in an expanded, but in a contracted interest. Although Isidore is not surpassed in comprehensiveness by any one of the line of Roman encyclopedists who preceded him, in the quality of his thought and the extent of his information he is inferior to them all. Secular knowledge had suffered so much from attrition and decay that it could now be summarized in its entirety by one man.

In spite of this it is very clear that if Isidore had treated these topics with any degree of reference to the actual realities of his own time, he would have left us a work of inestimable value. But he did not do so; he drew, not upon life, but upon books for his ideas; there was no first-hand observation. Moreover, the books which he consulted were, as a rule, centuries old.⁴⁹ He tells us practically nothing concerning his own period, in which so many important changes were taking place. For example, there are repeated and detailed references to the founding and early history of Rome, but no direct allusion to the political and social changes brought about by the disintegration of the Roman Empire; trifles attributed to a period thirteen centuries earlier seemed to interest him more than the mighty developments of his own epoch. Again, although he writes upon law, he does not appear to have heard of the Justinian code issued a century before⁵⁰; and in his chronology he fails to mention the proposal for a new era in chronology made also a century before his time by Dionysius the Less.⁵¹

Throughout the *Etymologies* there is a leading principle which guides Isidore in his handling of the different subjects, namely, his attitude toward words. His idea was that the road to knowledge was by way of words, and further, that they were to be elucidated by reference to their origin rather than to the things they stood for. This, in itself, gave an antiquarian cast to his work. His confidence in words really amounted to a belief, strong though perhaps somewhat inarticulate, that words were transcendental entities.

All he had to do, he believed, was to clear away the misconceptions about their meaning, and set it forth in its true original sense; then, of their own accord, they would attach themselves to the general scheme of truth. The task of first importance, therefore, in treating any subject, was to seize upon the leading terms and trace them back to the meanings which they had in the beginning, before they had been contaminated by the false usage of the poets and other heathen writers; thus the truth would be found. It was inevitable that, with such a preconception, Isidore's method in the *Etymologies* should be to treat each subject by the method of defining the terms belonging to it.

It is plain, then, that Isidore used the dictionary method in the *Etymologies* not as a matter of convenience, but on philosophic grounds. His unthinking confidence in words was, however, ill-rewarded. It merely furnished a plan of treatment which evaded consecutive thought, and made it possible for his work to be a mass of contradictions, as it really is in very many points. Indeed, the task of combining in one work the ill-digested ideas of the school of Christian thought of his day and conflicting ideas borrowed from the pagans would not have been possible except to a writer who did not reason on his material, but was satisfied, as was Isidore, to give the derivation and meaning of his terms in the blind trust that a harmonious whole was thus constituted. We have some information in regard to the production of the *Etymologies*⁵². It was a work

⁴⁹ Brehaut, *op.cit.*; p 46

⁵⁰ *Ibidem* p. 165

⁵¹ *Idem*

⁵² note 41 in Brehaut, *op.cit.*; p.19 "The circumstances under which the *Etymologies* was written are referred to in Braulio's Introduction and in the life of Isidore by Ildephonsus (both in Migne, P. L. 82, col. 65-68); in the correspondence between Braulio and Isidore (Migne,P. L. 83, col. 910-914); and in the preface of the *Etymologies*."

undertaken at the request of Braulio, bishop of Saragossa, and it occupied the last years of Isidore's life. Parts of it, however – presumably those that could be used as text-books – were in circulation before his death. Braulio is our authority for the statement that the work as a whole was left unfinished, and that he himself divided it into twenty books, Isidore having made no division except that by subjects. As the brief preface, addressed to Braulio, informs us, the work was the product of long-continued reading, and contained verbatim extracts from previous writers, as well as Isidore's own comments.⁵³

The first edition of the works of Isidore was published in folio by Michael Somnius (Paris, 1580). Another edition that is quite complete is based upon the manuscripts of Gomez, with notes by Perez and Grial (Madrid, 1599). Based largely upon the Madrid edition is that published by Du Breul (Paris, 1601; Cologne, 1617). The last edition of all the works of Isidore, which is also regarded as the best, is that of Arevalo (7 vols., Rome, 1797-1803). It is found in P. L., LXXXI-LXXXIV. The "De natura rerum" was edited by G. Becker (Berlin, 1857). Th. Mommsen edited the historical writings of St. Isidore ("Mon. Germ. Hist.: Auct. antiquiss.", Berlin, 1894). Coste produced a German translation of the "Historia de regibus Gothorum, Wandalorum et Suevorum" (Leipzig, 1887).⁵⁴

Isidore's geographical concepts

The *Etymologiae* was initially compiled in manuscript form on vellum, with drawings in red and black. Measuring about 25.4 X 15.2 cm, the *Etymologiarum* consists of 20 Books on 175 leaves, including a *mappamundi*, and was meant to be an encyclopedia that summed up the knowledge accumulated by early 7th century Europe.

So significant was its impact that during the following centuries it served as a model of style and composition, as well as a primary source for many medieval writers. While the original manuscript has not survived, many copies of it have, reaching back to the 8th century⁵⁵.

Of specific interest, however, are the XIIIth and XIVth Books which deal with geographical topics and where Isidore attempts a survey of the world in a brief, definitive and educational manner. The XIIIth Book discusses the earth as a whole - the oceans, the seas, both open and enclosed, the tides, rivers and winds in other words, physical geography.

In the XIVth Book Isidore enumerates and briefly describes the political divisions of the world.

The author, leaned heavily himself on classical writers, as well as the teachings of the Church Fathers. For the XIIIth and XIVth Books specifically, Isidore's sources were primarily the Spanish presbyter Orosius and, secondarily, Solinus, who is quoted some 200 times, and Pomponius Mela⁵⁶.

However, this is not to imply that *Origines* is the compilation of a bestiary, or that his objects are those of the fabulist in any shape. Rather, this work by Isidore is a "compilation of compilations" that resulted in a major reference work of the Middle Ages. In view of the extraordinary influence of this treatise, the following excerpts reflects some of Isidore's geographical concepts:

The form of the Earth

Concerning **the earth we are told that it is named from its roundness** (orbis) which is like a wheel; whence the small wheel is called "orbiculus". For the Ocean flows round it on all sides and encircles its boundaries.

This is the text:⁵⁷

DE TERRA. "1. Terra est in media mundi regione posita, omnibus partibus caeli in modum centri aequali intervallo consistens; quae singulari numero totum orbem significat, plurali vero singulas partes. Cuius nomina diversa dat ratio; nam terra dicta a superiori parte, qua teritur; humus ab inferiori vel humida terra, ut sub mari; tellus autem, quia fructus eius tollimus; haec et Ops dicta, eo quod opem fert frugibus; eadem et arva, ab arando et colendo vocata.

⁵³ Extract from Brehaut, *op.cit.*, p 12-19

⁵⁴ From The Catholic Encyclopedia, art. "Isidor of Seville"

⁵⁵ Harley, J.B., The History of Cartography, Volume One, p. 255

⁵⁶ Kimble, G., Geography of the Middle Ages, p. 23

⁵⁷ from Isidori Hispalensis Episcopi Etymologiarum sive Originum libri XX, ed. W. M. Lindsay

2. *Proprie autem terra ad distinctionem aquae arida nuncupatur, sicut Scriptura ait (Genes. 1,10): 'Quod vocaverit Deus terram aridam.' Naturalis enim proprietates siccitas est terris; nam ut humida sit, hoc aquarum affinitate sortitur. Cuius motum alii dicunt ventum esse in concavis eius, qui motus eam movet. Sallustius (Hist. 2, fr. 28): 'Venti per cava terrae citatu rupti aliquot montes tumulique sedere.'*

3. *Alii aquam dicunt genetalem in terris moveri, et eas simul concutere, sicut vas, ut dicit Lucretius (6,555). Alii atomoi SPOGGOEIDE terram volunt, cuius plerumque latentes ruinae superposita cuncta concutiunt. Terrae quoque hiatus aut motu aquae inferioris fit, aut crebris tonitruis, aut de concavis terrae erumpentibus ventis."*

English translation:⁵⁸

On the earth.1. The earth is placed in the middle region of the universe, being situated like a center at an equal interval from all parts of heaven; in the singular number it means the whole circle; in the plural the separate parts; and reason gives different names for it; for it is called terra from the upper part where it suffers attrition (*teritur*); *humus* from the lower and humid part, as for example, under the sea; again, *tellus*, because we take (*tollimus*) its fruits; it is also called *ops* because it brings opulence. It is likewise called *arva*, from ploughing (*arando*) and cultivating.

2. Earth in distinction from water is called dry; since the Scripture says that "God called the dry land, earth". For dryness is the natural property of earth. Its dampness it gets by its relation to water. As to its motion (earthquakes) some say it is wind in its hollow parts, the force of which causes it to move.

3. Others say that a generative water moves in the lands, and causes them to strike together, *sicut vas*, as Lucretius says. Others have it that the earth is sponge-shaped, and its fallen parts lying in ruins cause all the upper parts to shake. The yawning of the earth also is caused either by the motion of the lower water, or by frequent thunderings, or by winds bursting out of the hollow parts of the earth.

Caput II. DE ORBE. "1. Orbis a rotunditate circuli dictus, quia sicut rota est; unde brevis etiam rotella orbiculus appellatur. Undique enim Oceanus circumfluens eius in circulo ambit fines. Divisus est autem trifarie: e quibus una pars Asia, altera Europa, tertia Africa nuncupatur.

Chapter 2. On the circle of lands.

1. The circle of lands (*orbis*) is so called from its roundness, which is like that of a wheel, whence a small wheel is called *orbiculus*. For the Ocean flowing about on all sides encircles its boundaries. It is divided into three parts; of which the first is called Asia; the second, Europe; the third, Africa.

But, as Brehaut⁵⁹ said: "The difficulties in ascertaining the world view held by Isidore are, then, considerable; but, since he was the leading representative of the intellect of the dark ages, and the only important writer on secular subjects in two centuries of western European history, the attempt to ascertain it seems worth while. In making this attempt, however, it is necessary to keep these difficulties of interpretation in mind; the danger is that we shall lay too much stress on the minor inconsistencies which he probably was not aware of, and so fail to see that large general consistency which, because of his lack of critical sensitiveness, he was able to believe that he found."

Isidore's physical universe in its form is geocentric, and is bounded by a revolving sphere which he believed to be made of fire, and in which the stars are fixed. The question of the number of spheres he treats in an inconsistent way, sometimes speaking of seven concentric inner spheres, and sometimes of only one. The relative size of sun, earth, and moon is accurately given - though, it appears, not without misgiving - and also the cause of eclipses of both the sun and the moon.

The subject of greatest interest in this connection is, of course, **the question whether or not Isidore believed in the sphericity of the earth**. It is maintained by some authorities that this notion was not lost at any time during the middle ages. Isidore certainly believed that the heavens constituted a sphere or spheres, and that the sun and moon revolved in circles around the earth. He states the theory of the zones correctly in some passages, applying it, however, not to the spherical earth but to the sphere of the heavens. On the other hand, he frequently gives expression to notions belonging to a primitive cosmology.⁶⁰

⁵⁸ Etimologiae book XIV chapter 1, from Brehaut, *op.cit.*, p 243

⁵⁹ Brehaut, *op.cit.*, p 50

⁶⁰ idem

The explanation it seems to be that Isidore accepted the terminology of the spherical earth from Hyginus⁶¹ without taking the time to understand it and applied it without remorse to the flat earth. He evidently thought that **zona** and **circulus** were interchangeable terms, (and make a similar confusion regarding **sphaera** and **circulus**) and his “circles” did not run around the circumference of a spherical earth, but lay flat on a flat earth, where they filled with sufficient completeness the orbis terrae or circle of the land.

Further **light on Isidore's conception of the earth** can be gained by noticing his use of the word *terra* in some the passages, and comparing the passage with that from Hyginus on which it is based.

In the passage from Hyginus, *terra* in the singular is the spherical earth occupying the centre of the sphere formed by the universe. The ocean is on the surface of this spherical earth, and it washes “the limits of the circle of lands”. For this reason the heavenly bodies “are [popularly] supposed to set in it.” Hyginus then turns to the dry land (terras), and describes the land surface “between the boundaries of the Arctic and torrid zones” as divided into three parts, Europe, Asia, and Africa. In Isidore *terra* means in the first instance, dry land, in the second – if he realized the meaning of Hyginus – the sphere; in the third, the dry land; in the fourth, the sphere. There is no evidence that Isidore was conscious of having made these transitions. He entirely omits the sentence in which Hyginus passes from the subject of the spherical earth to that of the lands. Isidore uses the terminology of the spherical earth, while having no conception of anything but the flat earth. The difficulty offered by the word *sphaera* in the passage quoted above from Isidore, is not insuperable, since it is clear from the following passage that he was not very definite in his notion of what a sphere was. A sphere and a circle apparently meant about the same thing to him.⁶²

Size of the earth

As to size, Isidore accepts Eratosthenes' estimate (via Macrobius) of 252,000 *stadia* for the circumference of the earth. One *stadia* equalled 625 feet in Isidore's calculations, but by employing the more usual reckoning of 8 *stadia* to the mile and 87.5 miles to the degree, he obtained the grossly exaggerated figure of 31,500 miles for the circumference, vice 25,000 miles.⁶³

The tripartite division of the world

“.....Undique enim Oceanus circumfluens eius in circulo ambit fines. Divisus est autem trifarie: e quibus una pars Asia, altera Europa, tertia Africa nuncupatur.

2. Quas tres partes orbis veteres non aequaliter diviserunt. Nam Asia a meridie per orientem usque ad septentrionem pervenit; Europa vero a septentrione usque ad occidentem; atque inde Africa ab occidente usque ad meridiem.

3. Unde evidenter orbem dimidium duae tenent, Europa et Africa, alium vero dimidium sola Asia; sed ideo istae duae partes factae sunt, quia inter utramque ab Oceano mare Magnum ingreditur, quod eas intersecat. Quapropter si in duas partes orientis et occidentis orbem divides, Asia erit in una, in altera vero Europa et Africa.”⁶⁴

“...For the Ocean flowing about on all sides encircles its boundaries. It is divided into three parts; of which the first is called Asia; the second, Europe; the third, Africa.

2. These three parts the ancients did not divide equally; for Asia stretches from the South through the East to the North, and Europe from the North to the West, and thence Africa from the West to the South. Whence plainly the two, Europe and Africa, occupy one-half, and Asia alone the other. 3. But the former were made into two parts because the Great Sea enters from the Ocean between them and cuts them apart. Wherefore if you divide the circle of lands into two parts, East and West, Asia will be in one, and in the other, Europe and Africa.”⁶⁵

Isidore was the first writer to clearly define the Mediterranean by that proper name: *mare Magnum*.

⁶¹ the passages in which Isidore states the theory of the zones correctly are from Hyginus (Gaius Julius Hyginus, c. 64 BC - 17 AD, Latin author, a native of Spain) *Poeticon Astronomicon* (*Mythographi Latini*, ed. Muncker, Amsterdam, 1691). Cf. note 62 p 53 in Brehaut, *op.cit.*

⁶² Brehaut, *op.cit.*, p 266

⁶³ Harley, J.B., *The History of Cartography*, Volume One, p. 343

⁶⁴ from *Isidori Hispalensis Episcopi Etymologiarum sive Originum libri XX*, ed. W. M. Lindsay

⁶⁵ *Etimologiae* book XIV chapter 1 from Brehaut *op.cit.*, p 243

Terrestrial Paradise

Proceeding to a systematic description of the countries of the world, of Asia Isidore says that it is bounded in the east by *Lake Maeotis* [Sea of Azov] and the river *Tanais* [the river Don]. "It contains many provinces and districts whose names and geographical situations I will briefly describe, beginning from Paradise" (Etymologies, Book XIV, chapter 3, On Asia)

"Paradise is a place lying in the eastern parts (of Asia) whose name is translated out of the Greek into Latin as *hortus* [i.e., garden]. It is called in the Hebrew tongue Eden, which is translated as *Delicate* [i.e., place of luxury or delight]. Uniting these two gives us *Garden of Delight*; for it is planted with every kind of wood and fruit-bearing tree, having also the tree of life. There is neither cold nor heat but a continual spring temperature. From the middle of the Garden a spring gushes forth to water the whole grove and, dividing up, it provides the source of four rivers.

Approach to this place was barred to man after his sin, for now it is hedged about on all sides by a sword-like flame [*romphaea flamma*], that is to say that it is surrounded by a wall of fire that reaches almost to the sky" (Etymologies, Book XIV, chapter 3, On Asia).

This obvious Biblical note coming so early in the topographical section of the treatise might lead the reader to expect its continuance in subsequent chapters; but apart from one or two entirely understandable references to Biblical lore - *Scythia and Gothia also are said to have been named by Magog, son of Japhet and the River Ganges which sacred scripture calls Phison, flows down from Paradise to the realms of India* - only the most sparing use of this source is made. By far the greatest percentage of Isidore's material is culled from pagan sources; indeed much of his geography might have been written by late classical writers such as Mela and Solinus.⁶⁶

Europe, in the true classical fashion, is divided from Asia by the river *Tanais* [Don] and is bordered on the north by the *Northern Ocean*. Hard by it, and forming the *ne plus ultra* of the known world, is the land of *Barbaria*, so called on account of the wild tribes inhabiting it. Enumerated among these tribes are the *Alani*, the *Dacians*, the *Goths* and the *Suevi*. "Thule is the furthest island in the Ocean in the Northern and Western waters beyond Britain", according to Isidore, "... having its name from the sun, because there the sun makes its summer halt, and there is no day beyond it; whence the sea is there sluggish and frozen." The western limit of the world is furnished by the *Fortunate Isles*, so named because 'they are blessed with abundance of produce; their woods yield apples naturally, their ranges of hills are clad with unplanted vines and everywhere there are crops and vegetables in place of pasture. Hence the false opinions of pagans, and the poems of secular poets, claiming that these islands were Paradise.

They are situated in the Ocean off the coast of Mauretania.'

Concerning **Africa**, Isidore says little that enables one to put bounds on it; 'it begins at the boundaries of Egypt, continuing to the south through Ethiopia to Mount Atlas.' As to Ethiopia in particular, he avers that 'the whole of it is under the southern pole [i.e., hemisphere]. Towards the west it is mountainous; in the middle it is sandy; to the east a desert ... In the south it is bounded by the ocean, and in the north by the river Nile.

The southeastern horizons of the world are circumscribed by the coasts of **India** 'containing many tribes and towns,' the island of *Taprobane* [Ceylon], *Chryse* [Malay Peninsula?], *Argyra* [Cattigara?], and *Tyle*, 'which is never without leaves on its trees.' Isidore states that *Taprobane* stretches 875 miles in length and 625 miles in width. It is separated from India by a river that flows between them. 'It is rich in pearls and precious stones; part of it is, however, infested with wild animals, but part is occupied by men.

In this island they say that there are two summers and two winters in one year and that flowers bloom twice.'

The Antipodes

For his time, Isidore shows a notable comprehensiveness of general ideas, even admitting the possible existence of *Antipodean* lands:

"Extra tres autem partes orbis quarta pars trans Oceanum interior est in meridie, quae solis ardore incognita nobis est; in cuius finibus Antipodes fabulose inhabitare produntur"⁶⁷.

⁶⁶ Brown, L., *The Story of Maps*, pp. 96-97

⁶⁷ *Etymologies*, Book XIV, Chapter 5, On Lybia; from *Isidori Hispalensis Episcopi Etymologiarum sive Originum libri XX*, ed. W. M. Lindsay

“Besides the three parts of the circle there is a fourth part across the Ocean on the South, which is unknown to us on account of the heat of the sun, in whose boundaries, according to story, the Antipodes are said to dwell”. (Etymologies, Book XIV, Chapter 5, On Lybia)

Isidore was NOT opposed to antipodean lands and was even open to the possibility that they were inhabited.

“Moreover those who are called Antipodes, because they are believed to be opposite to our feet, so that, being as it were placed beneath the earth, they tread in footsteps that are opposed to our feet. It is by no means to be believed, because neither the solid texture nor the center of the earth admits it. Besides, this is not established by any historical evidence, but the poets arrive at this conclusion by a sort of reasoning”⁶⁸

This concession by Isidore as expressed in the brief quote above indicated that he more than half believed in the sphericity of the earth and quite fully in the doctrine of the *Antipodes*. While Isidore was not consistent in the affirmation of his adherence to the theory, this particular passage was repeated so often by his successors that it became the formula through which those of the Middle Ages who accepted the existence of the *Antipodes* or *Antichthon* expressed their belief. As can be seen in the many examples of Isidorean maps included herein, there is no attempt to depict this fourth continent graphically.

However, the chief influence cartographically at least, in keeping the theory alive during this period was the *Beatus* group of maps⁶⁹ In this later map ‘family’ or group, there appears a statement on the strip of land located south of the Indian Ocean which is recognized as a quotation, with some curious errors, of the essential passage from the *Etymologiarum* just translated above.

St. Isidore of Seville was a highly influential encyclopaedist who was widely copied and cited throughout the Middle Ages.

Isidore was not opposed to antipodean lands and was even open to the possibility that they were inhabited.

St. Isidore is famous for his flat “T-shaped” maps, also known as “wheel” maps or “T-O” maps.

Maps show his belief in the Scriptures and his desire to depict their legends. The maps included Jerusalem at the center based on Ezekiel V:5: “This is Jerusalem: I have set it in the midst of the nations and countries that are round about her.” Some maps bore the Biblical names only; others had explanatory inscriptions stating, for instance, that Asia was named after a Queen Asia, “of the posterity of Shem, and is inhabited by 27 peoples; that Africa is derived from Afer, a descendent of Abraham, and has 30 races in 360 towns”; and that Europe, named from the Europa of mythology, “is inhabited by the 15 tribes of the sons of Japhet and has 120 cities”

His symbolic maps are often perceived as proof of flat earth thinking, but it is not true.

The Venerable Bede

The Venerable Bede was an historian and Doctor of the Church, born 672 or 673; died 735. In the last chapter of his great work on the “Ecclesiastical History of the English People” Bede has told us something of his own life, and it is, practically speaking, all that we know. His words, written in 731, when death was not far off, not only show a simplicity and piety characteristic of the man, but they throw a light on the composition of the work through which he is best remembered by the world at large. He writes:

“Thus much concerning the ecclesiastical history of Britain, and especially of the race of the English, I, Baeda, a servant of Christ and a priest of the monastery of the blessed apostles St. Peter and St. Paul, which is at Wearmouth and at Jarrow (in Northumberland), have with the Lord’s help composed so far as I could gather it either from ancient documents or from the traditions of the elders, or from my own knowledge. I was born in the territory of the said monastery, and at the age of seven I was, by the care of my relations, given to the most reverend Abbot Benedict [St. Benedict Biscop], and afterwards to Ceolfrid, to be educated. From that time I have spent the whole of my life within that monastery, devoting all my pains to the study of the Scriptures, and amid the observance of monastic discipline and the daily charge of singing in the Church, it has been ever my delight to learn or teach or write. In my nineteenth year I was admitted to the diaconate, in my thirtieth to the priesthood, both by the hands of the most reverend Bishop John [St. John of Beverley], and at the bidding

⁶⁸ Etymologies, Book IX, Chapter 2. On names of Nations, in Brehaut *op.cit.*, p 211

⁶⁹ Harley, J.B., The History of Cartography, Volume One, p. 255

of Abbot Ceolfrid. From the time of my admission to the priesthood to my present fifty-ninth year, I have endeavored for my own use and that of my brethren, to make brief notes upon the holy Scripture, either out of the works of the venerable Fathers or in conformity with their meaning and interpretation”.

The title *Venerabilis* seems to have been associated with the name of Bede within two generations after his death.

Bede's influence both upon English and foreign scholarship was very great, and it would probably have been greater still but for the devastation inflicted upon the Northern monasteries by the inroads of the Danes less than a century after his death. In numberless ways, but especially in his moderation, gentleness, and breadth of view, Bede stands out from his contemporaries. In point of scholarship he was undoubtedly the most learned man of his time.

His great work, the "*Historia Ecclesiastica Gentis Anglorum*", giving an account of Christianity in England from the beginning until his own day, is the foundation of all our knowledge of British history and a masterpiece eulogized by the scholars of every age.

Bede's chronological treatises "*De temporibus liber*" and "*De temporum ratione*" also contain summaries of the general history of the world from the Creation to 725 and 703, respectively.⁷⁰

The Venerable Bede took his cosmology from Pliny. "*His De temporum ratione* shows a knowledge of latitude and the annual movement of the sun into the north and south hemispheres from the evidence of varying lengths of shadows. He also wrote of a spherical earth".⁷¹

Another important fact with Bede is that he clearly held a spherical view, yet a 12th century edition of Bede's *De natura rerum* contained some of the well known T-O maps⁷².

If these maps were meant to depict a flat earth, as some have claimed, why would they have been included in Bede's *De natura rerum* which clearly supports a spherical view? It simply wouldn't make sense. While this says nothing of Bede, it gives credit to the argument that T-O maps are not proof of flat earth thinking.

Conclusions

A number of early Christian writers questioned and even opposed Earth's sphericity, generally, on theological grounds.

The term Antipodes plays a certain role in the discussion about the shape of the Earth. The antipodes being an attribute of a spherical Earth, some authors used their detected absurdity as an argument for a flat Earth.

Lactantius and Cosmas rejected the idea of a spherical Earth. Cosmas is one of the valuable geographical writers of antiquity. "His errors were those of his age, and rest chiefly on his reverence for the traditional interpretation of the Bible. But he was an acute observer and vivid describer, and his good faith is unquestionable"⁷³

St. Cyril of Jerusalem seems to have been in the flat earth camp. He quotes frequently from the Bible and portrays earth, using Gen. i. 6, as firmament floating on water.

Basil of Caesarea in one of his Homily talks about the shape of the Earth, showing a good knowledge of these disputes but defines this kind of knowledge as irrelevant

Saint John Chrysostom regularly refers to the Earth having four corners as the Bible does in his sermons: "every corner of the earth", "her action is known in every corner of the earth", "every corner of the earth seen by the sun" He is also quoted by Cosmas as opponent of a spherical earth view.

St. Augustine, for scriptural reasons, was opposed to inhabited antipodes, not a spherical earth.

An inhabited antipodes seem to encroach upon the fundamental Christian dogma of the unity of the human race, and the consequent universality of original sin and redemption.

Isidore was not opposed to antipodean lands and was even open to the possibility that they were inhabited. Referring to the Earth form he use the terminology of a spherical earth view.

⁷⁰ extract from *The Catholic Encyclopedia*, art. "The Venerabilis Bede" and from Philip Schaff, *History of the Christian Church*, vol.IV, pp 408-412

⁷¹ Peter Hunter Blair, *The World of Bede*, p.72

⁷² Harvey, P.D.A., *Medieval Maps*, p 56

⁷³ Henry Wace, *A Dictionary of Christian Biography and Literature to the End of the Sixth Century A.D., with an Account of the Principal Sects and Heresies*. p 217

Bede not only wrote of a spherical earth, but he did so without the cautious approach described above. This seems to indicate that from this time, a spherical view is widely held and that the Church is not concerned about a scriptural conflict.

During the Medieval Ages many believed that the paradise, called Eden in the Bible, was an actual place on Earth. Many maps tried to fix the location of it- the T-O style maps generally placed it in the very east of the world.

Maps during the Medieval Age did not attempt to portray geographic distances in the same manner contemporary maps of today do. Rather, maps provided ideas about theology and cosmology, instructing people about the fundamental meaning to the places on the map.

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Rezumat

Lucrarea se dorește o stabilire a reperelor în studierea conceptelor cartografice și geografice în scrierile Perioadei Patristice și a interpătrunderii acestora cu concepțiile teologice.

Avem de-a face cu două tipuri de autori. Pe de o parte cei care au făcut referiri la problema existenței Antipozilor și a faptului că aceștia sunt sau nu locuiți. Aceasta devine o problemă teologică din cauza consecințelor dogmatice pe care le presupunea existența unei rase de oameni de care Biblia nu vorbește și care nu sunt descendenți ai lui Noe. Problema conexă cu aceasta era dacă pământul este plat sau rotund. Unii dintre acești autori au susținut cu tărie că pământul este plat bazându-se în special pe o interpretare eronată a unor pasaje Biblice.

Pe de altă parte avem de-a face cu doi veritabili cartografi: Cosmas și Isidore al Seviliei de al căror nume se leagă creerea unor tipuri de hărți rămase repere în istoria cartografiei medievale

În aceste hărți elementele geografice se interpătrund cu cele istorice, mitice și religioase. Paradisul, de exemplu, este reprezentat alături de cele trei continente cunoscute, ca fiind un loc aflat undeva în Răsăritul extrem.

