

Augustine's Cosmography¹

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Summary: This study breaks new ground in abstracting from Augustine's spiritual symbology and in attempting to assemble his picture of the physical world as he saw it. Surprisingly, he believed that the two greatest bodies in the universe were the sky and the earth, with the former dome-shaped and covering the latter. The earth was essentially flat and surrounded by the mighty Oceanus. The sun and moon were the two greatest bodies in the sky, but each was much smaller than the earth. Hell was located in the bowels of the earth, while the Saints resided in the Heaven of heaven, somewhere above the starry firmament. Augustine believed that God was the author of both the universe and of the Scriptures and was reluctant to embrace human opinions about the world which could conflict with the divine truths in the Bible.

1. The Case for a Cosmography

Considering the enormous amount of scholarly analysis that Augustine's writings have received, it is amazing that practically none of this attention has been concerned with his picture of the physical

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world in which he thought that he lived. This article will begin to explore this relatively uncharted domain.

In the title of this article, the name *cosmography*,² means “a general description of the world, or of the universe;” it is more appropriate than the word *cosmology*, standing for “a branch of metaphysics that deals with the nature of the universe.”³ Augustine’s cosmology is traditionally represented as a triple-layered scheme of reality with God at the top, the human soul in the middle and the corporeal realm at the bottom.⁴ The present study explores that corporeal realm as it encompasses the salient features of both the earth and the heavens *as Augustine pictured them*. This qualification has been emphasized for two principal reasons.

First, it has been generally assumed that Augustine’s picture of the universe was merely some more rudimentary version of the modern one, with a comparatively small spherical earth surrounded by the immense heavens. This assumption of some modern scholars will be contradicted by the evidence available. Secondly, that assumption has resulted in some significant mistranslations from Augustine’s Latin. Finally, some aspects of Augustine’s worldview changed during his lifetime.⁵ Consequently, the extracts from Augustine’s works have been dated wherever possible.

Part of the reason for the scholarly neglect of Augustine’s cosmogra-

2. With acknowledgements to Webster’s *Ninth New Collegiate Dictionary*. Alternatively, The word *Weltanschauung* seems more appropriate to the observer than to the observed. The emphasis here is on the latter. On cosmology and biblical exegesis among the church fathers, see: A.T. Canavero, *Esegesi biblica e cosmologia. Note sull’interpretazione patristica e medioevale di Genesi 1,2*. Scienze filosofiche, 30. Milano, (Vita e Pensiero) 1981.
3. In any case, Augustine did not recognize cosmology as a separate subsistent discipline, let alone a metaphysical one. For an example of this perspective as imputed to Augustine, the reader is referred to V.J. Bourke’s *Augustine’s View of Reality*, The Saint Augustine Lecture 1963, Villanova, Villanova University Press, 1964. This perspective is also used in *Imagination and Metaphysics in Saint Augustine* by R.J. O’Connell S.J., Milwaukee University Press, 1986.
4. Bourke, *op.cit.* p. 3ff.
5. The most notable example of a change in his world-picture is the existence of the super-celestial waters (Gen 1.6-7) which he steadfastly maintained during most of his life, only to cast doubt upon the whole matter in later years (*Retr.* 2..(33).2.

phy has been an assumption that his Neoplatonic perspective⁶ regarded the corporeal world as both uncertain and obscure by reason of its ceaseless changes and the metaphysical darkness of its corporeal matter. Nevertheless, early in his writings, Augustine does affirm that the world revealed by the senses is surely the image of some world which the understanding apprehends.⁷ Even late in life Augustine said of the senses:

[Our knowledge] trusts the evidence of the senses in every matter; for the mind employs the senses through the agency of the body, and anyone who supposes that they can never be trusted is woefully mistaken.⁸

Therefore, despite his proclivity for symbols, Augustine made some assumptions about that external world in order to interact with it on a daily basis; these assumptions which represent his cosmology will be the focus of this article.

In addition to the senses there was a second important medium for Augustine's knowledge of the external world. He believed intensely in the Scriptures whose author was God Himself the Source of all truth. God was also the author of the external world. Therefore the Scriptures could be used for supplementary knowledge of certain aspects of that external world not immediately obvious to the senses. And indeed, significant cases will be discovered where Augustine follows this logic. In this regard, of prime importance for Augustine were the words of the apostle Paul, when he wrote of God: "Ever since the creation of the world, his invisible nature, namely, his eternal power and deity, has been clearly perceived in the things that have been made" (Rom 1.20). This verse occurs a dozen times in Augustine's earlier works alone.⁹ However, in reconstructing Augustine's cosmography abstraction will be

6. This perspective is quite explicit in his earlier works, and though later in his life it retreats into the background its powerful influence endures throughout all his subsequent writings.

7. "Videamus quid sit hoc nescio quid, quod suggeritur menti: certe sensibilis mundus nescio cuius intelligibilis imago esse dicitur." (*Epistola* 33 of 387). All Latin quotes are from the Maurists' edition of the *Opera Omnia*, Paris, Gaume, 1836-1839.

8. *City of God* (H. Bettenson translation) 19.18 (ca. 426). The Latin is: "[Scientia nostra] creditque sensibus in rei cuiusque evidentia, quibus per corpus animus utitur; quoniam miserabilis fallitur, qui nunquam putat eis esse credendum."

9. "Earlier" means the first fifteen years of extant writings, ending with the completion of the

made from the fact that his imaginative mind saw each physical thing as a symbol of some transcendent spiritual reality. This article will therefore focus on Augustine's picture of that physical world *in itself*, rather than in terms of spiritual realities.¹⁰

2. Ideas about the Created World

There are also some general aspects of the created universe which are relevant to understanding Augustine's worldview. First is the existence of order in the universe, which he saw as the expression of Wisdom's universal rule: "She reaches mightily from one end of the world to the other, and she orders all things well" (Wis 8.1).¹¹ More specifically relevant to the creation and constitution of the material universe was Wis 11.21 which says that the Creator has "ordered all things in measure, and number and weight;"¹² an observation which Augustine saw as also applying to the immaterial realm.¹³ This verse occurs nine times already in Augustine's earlier writings.¹⁴ Doubtless the significance of the verse for Augustine owed much to his early enthusiasm for the philosophy of

Confessiones in 401. Such numbers are from a private computer file.

10. For a very interesting and comprehensive summary of this symbolic universe, see the first chapter of *Soundings in St. Augustine's Imagination* by R.J. O'Connell S.J., New York: Fordham University Press 1994 (subsequently = *Soundings*). It should be stressed here that this universe is both symbolic and salvational in contrast to the present study which aims, as much as possible, to present Augustine's picture of what he thought was the physical universe.
11. This verse occurs ten times in Augustine's earlier works.
12. "Omnia in mensura et numero et pondere disposuisti."
13. *De Genesi ad litteram* (Henceforth: *DGnL*) 4.3.7ff. Written about 401-416, it has been translated into French as *La Genèse au sens littéral en douze livres*, volumes 48 & 49 in *Oeuvres de saint Augustin* (Bibliothèque Augustinienne) Bruges-Paris (Desclée Brouwer): 1972. Very helpful notes are provided by P. Agaësse and A. Solignac. What Augustine means by a literal interpretation is both complicated and consistent as is seen in volume 48, pp. 32-50 (Henceforth: *BA*). More recently, the work has also been translated into English by J.H. Taylor S.J. under the title of *The Literal Meaning of Genesis* (2 vols.) in the Ancient Christian Writers series, New York & Ramsey N.J. (Newman Press) 1982 (henceforth, *Taylor*). Thus, on the present topic of the meaning of Augustine's literal meaning, see Taylor 1, 9-12.
14. For its importance throughout Augustine's writings see *BA* 48.636-639 as well as J.J. O'Donnell, *Augustine: Confessions* Oxford: Clarendon Press (1992), vol. 2, 293-295 (henceforth: O'Donnell 2.293-295).

Pythagoras which highlighted the importance of numbers in things.¹⁵ That enthusiasm Augustine later expressly rescinded.¹⁶

Concerning the present material world Augustine maintained, against the Epicureans, that there were not innumerable other worlds.¹⁷ There was only this one world, outside of which there were not infinite stretches of space.¹⁸ Furthermore, in all his speculations on the universe as a whole, the question of its possible movement or size does not even seem to have occurred to Augustine, probably because he would have considered the question a vain waste of time which would have been better devoted to more important matters concerning eternal happiness.¹⁹

Another general question about unifying aspects of Augustine's cosmos is whether he followed the Plato whom he once so much admired, and conceived of the entire universe as an immense ensouled animal.²⁰ This view is stated a half-dozen times in Augustine's early writings,²¹

15. *De ordine* 2.18ff. (386).

16. "Nec illud placet, quod Pythagorae philosopho tantum laudis dedi, ut, qui hanc audit vel legit, possit putare me credidisse nullos errores in Pythagorica esse doctrina, cum sint plures iidemque capitales." (*Retractationes*. 1.3.3).

17. Cf. Lucretius, *De natura rerum* 2.1048ff. On this topic in the earlier Christian tradition, see J. Pépin, *Théologie cosmique et théologie chrétienne* (Ambroise, *Exam.* 1.1-4) Paris (Presses Universitaires de France, 1964): 72-78.

18. *De ciuitate* Dei 11.5 (417).

19. Cf. *DGnL* 2.16.34: "Nobis enim de intervallis et magnitudine siderum subtilius aliquid quaere, talique inquisitioni rebus gravioribus et melioribus necessarium tempus impendere, nec expedit, nec congruit." For some early estimates about the sun and moon, see Sir T. Heath (Hereafter: Heath), *Aristarchus of Samos; The Ancient Copernicus* Etc. Oxford: clarendon, 1913, pp. 27, 28, 32, 37-38, 114-115, 331 & 250.

20. Cf. *Timaeus* 30b-, 34b & 41d, *Laws* 10.896e-899a & *Philebus* 30a-. Cf. Varro's opinion to the same effect in *ciu. Dei* 7.6 & 10.29.2 (of about 416). See also, D.R. Dicks (hereafter: Dicks), *Early Greek Astronomy to Aristotle*, Great Britain: Thames & Hudson, 1950, pp. 116-118, 134, 136 & 140.

21. *De ord.* 2.11.30, *De immortalitate animae* 15.24 (387), *De musica* 6.14.44 (387-389) & *De Genesi ad litteram* (*Imperfectus liber*) henceforth: (*DGnL(imp)*) 4.17 & 8.29-30 (393). Cf. *Sermo* 241 7.7 (405-410). *DGnL(imp)* and *De Genesi contra Manichaeos* have been translated into English by R.J. Teske S.J.: *Saint Augustine on Genesis*, Fathers of the Church, v. 84 (A New Translation), Washington, D.C.: The Catholic University of America Press, 1991. The English titles are respectively: *On the Literal Interpretation of Genesis: An Unfinished Book*

but finally in the *Retractationes* (426/27) he repented of his earlier opinions, yet declared that he neither affirmed nor denied such a universe.²²

From another aspect of the world, in the *Confessiones* Augustine describes an earlier theory to which he once subscribed and which saw the universe as being huge indeed, but conceived after the manner of a sort of sponge, and was as it were, situated in, and permeated by, an infinite ocean. This ocean was God.²³ On the other hand, the mature Augustine stressed God's omnipresence in the material universe, even to the extent of being present in the bowels of hell (*Conf.* 1.2.2 - 1.3.3).

As for diversity in the cosmos, early in the second book of the *De Genesi ad Litteram*, following the tradition of the natural philosophers, Augustine divided the material world into four layers (or proper places)²⁴ according to the decreasing weights of the elements (*secundum pondera elementorum*): earth, water, air and fire.²⁵ Yet for Augustine, the nature of the human soul was above them all, thus suggesting some notion of a "place" for it in the higher universe.²⁶ In addition, as men-

and *Two Books on Genesis against the Manichees*. For the above two references to the world-soul in the former work, see p. 155, n. 32 and p. 166, n. 70. Also, see R. Teske S.J., "The World-Soul and Time in St. Augustine," *Augustinian Studies* 14 (1983): 72-92 and also "The Problem of a World Soul," by Vernon J. Bourke, pp. 78-90 in his *Wisdom from St. Augustine*, Houston: Center for Thomistic Studies, 1984, as also his earlier "St. Augustine and the Cosmic Soul," *Giornale di metafisica* 9 (1954): 431-440. Plato's doctrine of the world-soul is also mentioned, without criticism, in *ciu. Dei* 13.16 (418).

22. "Sed animal esse istum mundum, sicut Plato sensit aliique philosophi quamplurimi, nec ratione certa indagare potui, nec divinarum Scripturarum auctoritate persuaderi posse cognovi." (*Op. cit.* 1.11.4).
23. *Conf.* 7.5.7. J.K. Ryan, in the notes to his translation (p. 389, ch. 5, n. 1), following the opinion of J. Gibbs & W. Montgomery in their well-known edition of the Latin text, sees this image as derived from Plotinus (*Ennead* 4.3.9). However, at least one author sees it as derived from the Stoics. See R.J. O'Connell S.J., *St. Augustine's Early Theory of Man; AD 386-391*, Cambridge (Mass.): Belknap Press, 98. See also Augustine's thought along the same lines at *Conf.* 7.1.2 & O'Donnell 2.403-4.
24. Cf. Aristotle, *Meteor.* 1.2. and *BA* 48.614-622. For the order of the elements in the earlier Christian tradition, see also J. Pépin, *op. cit.* 418-461.
25. *DGnL* 2.1.3-2.3.6. The stasis of the elements is a particular case of the universal rule of Wisdom encountered above. Cf. Plato, *Tim.* 49c-63e. The four-element theory of course, originated with Empedocles about 450 BC.
26. "Sic est enim hinc sursum versus terra prima, aqua secunda, tertius aer, quartum coelum, ut super omnia sit animae natura." *ciu. Dei* 22.11.2 (426). The sense in which the human soul

tioned earlier, being scrupulously guided by the words of Gen 1.6-8, he also situated other waters above the visible heaven,²⁷ of which more later. Meanwhile, this phenomenon of what may be termed the super-celestial waters is the first prominent example encountered where Augustine used the Bible as a source of information for the natural sciences.

Another division of the universe as a whole in which he had also once believed and which he subsequently attacked, was the Manichean belief that the universe consisted of two vast regions, one supremely evil and consisting of darkness, and an opposing region which was eminently good and full of light.²⁸ According to the Manichean mythology, the two regions were constantly engaged in a great cosmic struggle against one another.²⁹

3. "The Two Greatest Bodies of the Universe"

Without an appreciation of Augustine's cosmography, it is difficult for a modern reader to appreciate the significance of Augustine's claim that the physical heaven and the earth were the two greatest bodies in existence. This is illustrated by a passage in the *Confessions* which the Ryan translation renders as: "As Scripture said before, God made heaven and earth, namely, the whole corporeal mass of the world, divided into two immense parts (*in duas maximas partes*), higher and lower."³⁰

was superior will be seen later.

27. "Quoquo modo autem et qualeslibet aquae ibi sint, esse eas ibi minime dubitemus: major est quippe Scripturae hujus auctoritas, quam omnis humani ingenii capacitas." (*DGnL* 2.5.9). On this topic of the much-discussed supercelestial waters in the earlier Christian traditon, see J. Pépin, *op. cit.* 390-417 & 418-422.

28. *Contra epistolam Manichaei quam vocant fundamenti* 20.22-22.24 & 34 (396); *Contra Faustum Manichaeum* 4.2 (397/398) & *Conf.* 7.2.3.

29. J.P.Maher, "Saint Augustine and Manichean Cosmogony," *Augustinian Studies* 10 (1979): 91-104. Cf. *REAug* 28(1982): 339.

30. "Unde caelum et terram fecisse scriptura praedixit, totam scilicet corpoream mundi molem in duas maximas partes superiorem atque inferiorem distributam" (*Conf.* 12.21.30, *ad finem*) See also *DGnL* 2.13.27. Cf. *ciu. Dei* 22.11 (426) and Plato, *Tim.* 31b.

Comparison with the Latin shows that, following a traditional well-worn path,³¹ that *duas maximas partes* has been rendered by Ryan as “two immense parts” instead of “the two greatest parts” as the Latin requires. J. J. O’Donnell, in his two-volume commentary on the *Confessions* did not notice the difficulties of the translators with regard to *duas maximas partes*.

In his translation of the *De Genesi ad litteram (liber imperfectus)*, R.J. Teske renders the phrase: “mundus qui *duabus maximis partibus*, coelo scilicet et terra, constat,”³² as: “the world, which consists of *two chief parts*, heaven and earth.” Likewise, J.H. Taylor, in his translation of the *De Genesi ad litteram* renders “mundus iste visibilis...qui factus est biduo propter *duas partes suas maximas*, quibus constat universus, coelum scilicet et terram.” as: “This universe, then, was created in two days in view of the *two great parts* that compose it, namely, heaven and earth.” It is significant that here Augustine is even saying that two days were required *because* heaven and earth constitute the two greatest parts of the universe. Nevertheless, again refusing to accept the significance of the “maximas”, the passage is rendered as: “This universe, then, was created in two days in view of the *two great parts* that compose it, namely, heaven and earth.” It is significant that here Augustine is even saying that two days were required *because* heaven and earth constituted the two greatest parts of the universe. Also, as in the previous example, the present tense (*constat*) is used, and not the past (*constitit*), showing that Augustine was thinking of his own present universe rather than the primal universe of creation.³³

The problem arises later in the same work with the passage: “ideoque et ista [quattuor elementa] *in duabus maxime mundi partibus* generaliter terrae nomine complectuntur.”³⁴ Here, the “in duabus maxime mundi

31. Both the Pusey and Warner translations have “two immense parts”, while the Pine-Coffin rendition is “two main parts” and Sheed has “two great parts”. The recent H. Chadwick translation uses “two very large parts”.

32. *DGnL(imp)* 4.11. Italics are added here and in the other cited extracts which follow immediately in the text.

33. *DGnL* 2.13.27.

34. *DGnL* 3.7.9. The term “earth (*terra*)” includes all four elements: fire, earth, water and air.

partibus" is omitted entirely in translation.³⁵ In view of the surrounding context, the passage could be more accurately rendered as: "And so those [four elements] are generally embraced by the name of earth (in the broader sense) which is one of the two greatest parts of the universe." The other greatest part was, of course, the visible heaven with the celestial bodies. That Augustine is here thinking of the visible heaven and of the earth (consisting of the four elements) as those two greatest parts, is also obvious by the continuation of the above which translates as: "as the psalm shows, enumerating all higher things by that principle: 'Praise the Lord from the heavens', and all lower things by the other principle: 'Praise the Lord from the earth'."³⁶

The source of those persistent mistranslations is that all the above scholars implicitly assumed that Augustine's universe was geocentric, with a comparatively small global earth suspended in the center of the immense heavens. But in such a perspective the phrase *duae maximae partes* (for the terrestrial region and the visible heaven) cannot possibly make sense. For those translators the earth may indeed be great, but they assumed that it could not be one of the two greatest bodies in existence, being encompassed (according to the modern view) by the incomparably greater visible heavens containing also bodies far greater in size than the earth. Whence it was necessary to suppress the word "greatest."

The above problem immediately vanishes when one realizes that Augustine was *not* thinking of a global earth, but rather of an immense disk-shaped one (consisting of the four elements) covered by a comparably immense dome-shaped sky, or visible heaven. These two bodies, as Augustine has said in the many places above, are the two greatest bodies in the universe. Augustine's basis for this startling belief would seem to be the very first sentence in the Bible: "In the beginning God created the

See the note and its context in Taylor 1, 242, n. 21.

35. The passage is rendered as: "The elements, then, as found both on the earth and in the surrounding atmosphere are included under the term 'earth' in the broader sense of that word."

36. "Ideoque et ista in duabus maxime mundi partibus generaliter terrae nomine complectuntur: sicut ille psalmus ostendit, omnia superiora ab illo principio enumerans, 'Laudate Dominum de coelis'; omniaque inferiora ab alio principio. 'Laudate Dominum de terra'." (*DGnL* 3.7.9).

heavens and the earth.” Since every other thing in the universe was ultimately derived from these, therefore they had to be the two biggest bodies in the universe.³⁷

The basis for this startling conclusion would seem to be the first sentence in the Bible: “In the beginning God created the heavens and the earth.” Though Augustine does not put it exactly this way, they can be taken as encompassing all of creation. A sign of this is that, after the completion of the work of the sixth day (Gen 11.31) the creation of the heavens and the earth is again mentioned three times each in the first four verses of the second chapter of Genesis.

With heaven and earth being the two greatest bodies in the universe, then it makes sense that earth is at the bottom of the universe as Augustine says on numerous occasions.³⁸

One biblical source of this lowly status of the earth in Augustine’s universe is suggested by his interest in Is 66.1 which refers to the heavens as God’s throne and the earth as God’s footstool (and therefore at the bottom of the universe). This verse occurs some thirty-two times in Augustine’s writings. So Augustine could say of the universe that it extended “from the heights of heaven to the depths of earth.”³⁹

From this picture, if heaven and the earth were the two greatest parts (*duae maximae partes*) of the universe,⁴⁰ then the bodies of stars were each much smaller than the immense earth. However, their small bodies were considered far more perfect than all earthly ones,⁴¹ presumably be-

37. *DGnL* liber 1.

38. “Hoc enim totum corporeum...cujus fundus est terra nostra.” (*Conf.* 12.2.2. Cf. 4.11.16 & 12.21.30). See also *ciu. Dei* 7.23.1 (of 415-7), *Quaestiones in Heptateuchum* 2.54 (419), *En. in Ps.* 148 9, etc. There is also the disturbing metaphor of Christ having been in this world like a fish in the depths of the ocean: “Christus ‘Piscis’...in hujus mortalitatis abyssu velut in aquarum profunditate.” (*ciu. Dei* 18.23 of 425/6). See also previous and note 80.

39. *Conf.* 8.3.8.

40. This also implies comparable vertical dimensions, so that Augustine must have imagined the earth to be about as deep as the visible heavens were high.

41. “Luminaria clarent et sidera, quae corpora longe sunt meliora terrestribus.” (*DGnL* 12.30.58). Cf. *De libero arbitrio* 3.5.17 (388-395) and *DGnL(imp)* 8.29. For opinions of

cause of their elevated positions in the vertical universe and also since they were thought to be more perfect in their natures, since they were composed of fiery-ethereal matter⁴² which was deemed to be closer to the immaterial order than to the gross matter of earthly bodies.

The conception of the heaven and earth as the two greatest parts of the universe and as upper and lower, respectively, goes back at least to Plato.⁴³ Indeed, even while attacking the Platonists in the last book of the *City of God*, Augustine describes their picture of the universe, a picture which is so much like his own, at least as far as the elements are concerned:

They have learned to be sure, from their master, Plato, that the two greatest bodies of the universe (*mundi duo corpora maxima*) are linked and connected by two intermediary elements, air and water. Then they say, starting from this earth at the bottom and working upwards, the next element is the water, above that the air, and above that finally, the sky (*coelum*).⁴⁴

Against this layered universe of the four elements, it could be countered that a hint of a spherical (?) earth is found in the same *City of God* when Augustine was attempting to refute the claims of some philosophers that after the present life the spiritual bodies of the saints could not lose their natural heaviness and so could not be located in the upper heavens. Augustine counters with the theory of some other natural philosophers who would have the whole earth balanced on nothing: "And I will refrain from asking them why they do not believe that an earthly body can exist in heaven, although the whole earth may be 'balanced on nothing' [Job 26.7]." ⁴⁵

earlier authors, see Taylor 2, 315, 153.

42. *DGnL(imp)* 8.29 & *DGnL* 12.30.58. See also Taylor 1, 227, n. 33.

43. *Tim* 31b-32c.

44. *Ciu. Dei* 22.11 (426). Cf. *Timaeus* 31b-c. Augustine seems to be ignoring Plato's observation, a little later in the text (33b), that God made the world in the form of a globe. But see Dicks 117.

45. *Ciu. Dei* 13.18 of 418 (H. Bettenson translation). The Latin is: "Nolo enim quaerere, cur [philosophi] non credant terrenum posse esse corpus in coelo, cum terra universa libretur in

Augustine then makes a more definite allusion to the Aristotelian-Ptolemaic universe with its central global earth, when he says: "*It may be, indeed (fortassis enim), that an even more plausible argument may be based on (habeatur) the fact of a center of the universe on which all heavier bodies converge.*"⁴⁶ This extract would have the earth, considered to be the heaviest of all bodies according to the four-element theory,⁴⁷ at that hypothetical center of the universe, and therefore to be global in shape, with the spherical heavens surrounding it. From its hypothetical tone (*fortassis enim...habeatur*) this is a viewpoint which was useful to Augustine for purposes of rhetorical rebuttal, but which, to the best of my knowledge, is not demonstrably his own.⁴⁸ Otherwise it would be incompatible with his oft-repeated phrase *duae maximae partes mundi* for the earth and sky.

Moreover, a letter of Augustine from 419 implies a disk-shaped earth.⁴⁹ There, relying principally on a verse from Psalm 71 and the ancient notion of the world-encircling Oceanus,⁵⁰ Augustine saw the essentially flat earth as an immense island. Writing of the predicted spread of

nihilo."

46. "*Fortassis enim de ipso medio mundi loco, eo quod in eum coeant quaeque graviora, etiam argumentatio verisimilior habeatur*" (*ibid.*). Italics have been added to both the Latin and the English versions of the text. The idea of a spherical earth seems to have originated with the Pythagoreans and Parmenides (Dreyer 20f & Dicks 51). Pythagoras was much admired by Augustine in his early works, particularly in *De ordine* 2.10.53-54.

47. See notes 50 & 51 above.

48. When discussing the possibility of a soul of the universe, the same non-committal attitude is found in Augustine's awareness of the geometers' opinion about a center of the (spherical?) earth: "[Hanc enim animam Plato ab intimo terrae medio] quod geometrae centron vocant." (*ciu. Dei* 13.17).

49. *Ep[pistola]* 199 12.47. The idea of a disk-shaped earth is first associated with the Ionians (Heath 18, 19, 25 & 40).

50. The verse is: "[Evangelium] dominabitur a mari usque ad mare, et a flumine usque ad terminos orbis terrae. (Ps 71.8)." Similarly, early in the second book of the *DGnL* Augustine says: "Now we are seeking to know whether the Creator has assigned to the mass of waters, not just one proper place *around the earth (circa terram.)*" (*Op. cit.* 2.1.2. Italics are added). Augustine admittedly only believes in the existence of this Ocean on the testimony of others (*Conf.* 10.8.15). This notion of the earth-encircling Oceanus goes back at least to Homer (*Iliad* 18.607). See also Dicks 29-30.

the Gospel throughout the entire world (*in universo mundo*), Augustine saw the circle (*orbis*) of all the lands of the world as in a certain way constituting the greatest island, since they were all ultimately surrounded by the mighty Oceanus.⁵¹ Citing Ps 71.8, he says: "'From sea' however 'to sea' the circle is complete with all the nations, since the world is surrounded by the sea, Oceanus."⁵²

Farther on in the text the wording shifts from nations to islands, when, with a rare quote from Sophonia (Zephania), he says that all the islands will adore God,⁵³ because there will be no lands where the Church will not exist.⁵⁴ Then, repeating the above picture of the world, he says:

"[The Gospel] will reign from sea to sea" by which each island is surrounded just as in the entire circle of lands, which in a certain manner is the greatest island [composed] of all of them, because Oceanus surrounds it.⁵⁵

A more explicit detail is added to this picture of Augustine's world by an interesting section in his exposition on psalm 76.⁵⁶ Commenting on line 19: (*Vox tonitrui tui in rota* - literally: "the voice of thy thunder

51. Writing of the coming reign of Christ, the Latin is: "Atque ita et in insulis singulis quibusque impletur quod dictum est, 'dominabitur a mari usque ad mare' [Ps 71.8], quo unaquaeque insula cingitur; sicut in universo orbe terrarum, quae tanquam omnium quodammodo maxima est insula, quia et ipsam cingit Oceanus." (*Ep. 199* 12.47).

52. *Ibid.* The Latin is: "'A mari' autem 'usque ad mare' totus est orbis cum omnibus gentibus, quoniam mari oceano cingitur universus." Cf. *En. in ps. 71* 11 & Zach (Zech) 9.10.

53. "Et adorabunt eum unusquisque de loco suo, omnes insulae gentium" (Soph 2.11). (*Ibid.*).

54. Interestingly enough, he explains in the text that he had recently heard of islands out in the Oceanus (outside the Mediterranean Sea?) which had received the Gospel.

55. *Ibid.* (My translation). The Latin is: "[Evangelium] 'dominabitur a mari usque ad mare,' quo unaquaeque insula cingitur; sicut in universo orbe terrarum, quae tanquam omnium quodammodo maxima est insula, quia et ipsam cingit Oceanus." An interesting but irrelevant detail here is that Augustine goes on to remark on recent news of the Gospel's having arrived at the western seashores of the Oceanus.

56. The date of this exposition is unknown. The phrase of which it is question - *vox tonitrui tui in rota* - occurs a whole six times in the one paragraph (*En. in ps. 76* 20) and is also found once in the commentary on another psalm (*En. in ps. 59* 12) where *rota* is directly equated with *orbis terrarum*.

in a wheel”) Augustine remarks that as boys, when they heard rumblings of thunder from heaven, it sounded to them like carriages rolling out of a stable.⁵⁷ The implied connection with the line of the psalm is through the word *rota* (wheel).

After discounting several understandings of that line, including their boyhood fantasy, Augustine says: “The circle (*orbis*) of the lands [of the earth] is a wheel (*rota*), for an encircling of the world of the lands is also deservedly called a circle (*orbis*).”⁵⁸ According to the Latin dictionary of Lewis & Short, *Orbis* can mean a ring, round surface, disk, hoop, orbit, orb or a circle, though the context of the wheel (*rota*) seems clearly to denote a disk or wheel, especially since *rota* is used by Augustine three times in one place for each meaning as signifying either a flat wagon wheel, or a flat potter’s wheel.⁵⁹ Also, if Augustine had intended to be unambiguous, he would have used *sphaera*, or *globus* for “the earth” instead of *orbis*.

Finally in regard to Augustine’s opinion on the earth’s shape, a search was conducted of all of his works for the key words which could possibly be used in maintaining a global theory of the earth’s shape.⁶⁰ With two merely speculative exceptions already encountered, no passages were found in which Augustine was promoting the idea of a global or spherical earth.

It remains then that Augustine’s universe consisted of the inverted dish-shaped visible heavens, or sky, covering the essentially flat disk-shaped earth. For Augustine, these are the two greatest bodies in the universe. As noted above, the name “earth” signifies that region occupied

57. “Solebamus pueri suspicari, cum audiremus tonitrua de coelo, quasi vehicula de stabulo processisse.” (*En. in Ps. 76* 20).

58. *Ibid.* (My translation). The Latin of this passage is: “Orbis terrarum est rota: nam circuitus orbis terrarum, merito et orbis dicitur.”

59. Thus, in one work it is used three times for a wagon-wheel (*En. in Ps. 132* 12), and in another place the (flat) potter’s wheel is used three times as an image of the sky whirling around (*ciu. Dei* 5.3, of about 415).

60. The search-words with their occurrences in brackets were: *glob** (63), *rotund** (36), *conglob** (14) and *sphaer** (14). Other search-words with few and irrelevant occurrences were: *rotund**, *rutund**, *teres* and *teret**. No occurrences were found for *conrot**, *conrut**, *corrot** and *corrut**.

by the four elements, among which the earth proper is covered by the air, and surrounded by the mighty Oceanus. The shape and contents of the heavens will be considered later in this treatise.

4. The Earth and the Human Race

For Augustine, the surface of the essentially flat earth was divided into three parts,⁶¹ one half of it consisted of Asia, stretching from the south through the east to the north; the other half was divided into Europe (from the north to the west) and last, Africa stretching from the west to the south. These parts were surrounded by the great sea, Oceanus, from which a small amount of water flowed into the center of the land-masses, so forming those seas (our Medi-terranean Sea) frequented by ships.⁶² These seas separated Europe from Africa.⁶³

For Augustine, by far the most significant of the earth's contents was the human race which had peopled the earth for less than 6,000 years.⁶⁴ Following the account in Genesis, the body of the first human was made from the slime of moist earth, but the soul was not from any corporeal element, even of the subtle element of air (to which his breath belonged), but from the very breath of God (Gen 2.7), who was infinitely above both the corporeal and spiritual orders.⁶⁵

With a body formed from earth and the living soul from God, the human being was a creature of two opposed worlds, the earthly and the heavenly and so walked beneath the sun, yet (by virtue of a spiritual soul) belonged above the sun.⁶⁶ The combination of the spiritual soul

61. *Ciu. Dei* 16.17 (ca. 420). Regarding Asia, see also *ibid.* 18.2.

62. "Mari quippe magno cingitur terra, qui vocatur Oceanus; de quo influit quiddam exiguum in medio terrarum et facit ista maria nota nobis, quae navigiis frequentantur." (*En. in Ps.* 71 11). Cf. *ciu. Dei* 16.17 & Dicks 29-30.

63. *En. in Ps.* 71 11 & *ciu. Dei* 16.17.

64. *Ciu. Dei* 12.11. The human race was also in the last of the six ages assigned to it before the end of the world and the eternal sabbath (*De cat[echizandis] rud[ibus]* 21.22 and *ciu. Dei* 22.30).

65. *DGnL* 7.12.18-19.

66. *En. in Ps.* 38 10.

and the material body meant that through the subtler elements of fire (light) and air the immaterial soul governed the material body which was composed of the grosser elements.⁶⁷ As for this composite, Augustine was so impressed with the advice of Wis 9.15 about the human body weighing down upon the soul that the verse occurs some dozen times in his earlier works alone.

According to Scripture⁶⁸ and in line with the typical view of classical antiquity,⁶⁹ Augustine believed in an underground region for the souls of the dead. Furthermore, throughout his life he believed that underground region contained real fire for the punishment of the souls of sinners.⁷⁰ While human souls were not material, Augustine believed that they preserved a resemblance to the bodies that are experienced in dreams.⁷¹ Those souls who sinned through love of the flesh were rightly condemned to suffer under the earth since dead flesh belonged in the earth.⁷²

In addition, and in accord with his notion of a vertical universe, Augustine also believed that there were two layers to the underworld, with the lower one being reserved for those who had committed the more serious sins.⁷³ These infernal regions constituted the permanent location of the region of the damned. On the other hand, Augustine could not ascertain from Scripture where the souls of the first dead saints would have been located prior to their entry into Paradise.⁷⁴ Also, as late as the

67. *DGnL* 7.15.21.

68. Deut 32.22, Luc 16.22-26, Phil 2.10 etc. See also Taylor 2, 320, n. 172.

69. The locus classicus is of course found in the sixth book of the *Aeneid* with Aeneas' voyage into the netherworld to be in his father's presence.

70. *DGnL* 12.33.62-34 & 66. Cf. *Ep.* 164 3.7 (ca. 415), *Ep.* 187 2.6 (417) & *Retr.* 2.24.2. Late in life, Augustine reaffirmed the real location of the infernal regions beneath the earth (*Retr.* 2.24 (51).2 *ad finem*) where the fire is real (*ciu. Dei* 21.10.1, about 427).

71. When writing of the likeness of the soul to the body as perceived in dreams, as a criterion for this condition of the soul in the netherworld, Augustine says: "Proinde si hanc similitudinem etiam apud inferos gerit, non corporalem, sed corpori similem." (*DGnL* 12.33.62).

72. *DGnL* 12.34.66: "Quoniam defunctorum animae inferis dignae, carnis amore peccaverunt, hoc eis per illas corporalium similitudines exhibeatur, quod ipsi carni mortuae solet, ut sub terram recondatur." Cf. "Melius est carne ambulare super terram, quam cupiditate ire sub terram." (*En. in Ps.* 63 18).

73. *De vera religione* 52.101 of 389-391.

age of 61 (in 415), Augustine confessed that (probably because of the story of Dives and Lazarus) he still did not understand the Hell into which Christ descended to lead forth the souls of the saints of antiquity who were there.⁷⁵

5. The Impossibility of Antipodean People

Regarding the actual shape of the earth, Augustine resisted the notion of a spherical earth as is indicated by an extract (dated at about 420) from the *De ciuitate Dei*. In this passage he regarded the notion of antipodean people on a supposed global earth as contrary to reason, when he says:

As for the fabled "antipodes," men, that is, who live on the other side of the earth, where the sun rises when it sets for us, antipodean men who plant their footsteps opposite ours, there is no rational ground for such a belief (*nulla ratione credendum est*).⁷⁶

The reasoning which follows is well worth examining in detail, not only because it throws much light on Augustine's cosmography, but also since it shows how a lack of appreciation of that cosmography has resulted in a central passage in his reasoning process being misunderstood and so mistranslated. To continue then from the above extract, Augustine goes on to say that those who believe in a race of antipodean men,

admit that they have not discovered this from any historical knowledge (*neque hoc ulla historica cognitione didicisse affirmant*), but as it were by conjectural reasoning (*sed quasi ratiocinando coniectant*).

74. *DGnL* 12.33.63-64.

75. *Ep.* 164 2.3-3.7 of ca. 415, but see Taylor 2, 320, n. 172. Cf. Act 2.24 & 27.

76. This extract is from the H. Bettenson translation. The Latin is: "Quod vero et Antipodas esse fabulantur, id est, homines a contraria parte terrae, ubi sol oritur, quando occidit nobis, aduersa pedibus nostris calcare vestigia, nulla ratione credendum est." (*Op. cit.* 16.9). For the names of some of the ancients involved in the controversy over the possibility of antipodean men, see *PL* 6.425. It is interesting that the Pythagoreans, once so much admired by the young Augustine (*De ord.* 2.20.53-54) believed in the antipodes (Dreyer 37ff.). Augustine's attitude to the antipodes is also to be contrasted with that of Cicero (*Rep.* 6.20.21).

They reason from this that the earth is suspended within the concavity of the [physical] heavens (*eo quod intra convexa coeli terra suspensa sit*) and the world [*i. e.* the universe] would then have the same place as both lowest and middle (*eumdemque locum mundus habeat, et infimum, et medium*). From this they are of the opinion that the other part of the earth, which is below [*i. e.* underneath] cannot lack human habitation (*et ex hoc opinantur alteram terrae partem, quae infra est, habitatione hominum carere non posse*).⁷⁷

For lack of an appreciation of Augustine's cosmography, a key phrase in the above reasoning is easily mistranslated. In the Marcus Dods translation, *eumdemque locum mundus habeat, et infimum, et medium* is rendered as "and that it has as much room on the one side of it as on the other." The more recent translation by H. Bettenson comes nearer the mark: "so that the lowest point and the middle point of the world are identical."

But the conflict of two cosmographies here must be appreciated for the phrase just mentioned to be understood. I have translated it as: "the world [*i. e.* the earth] would then have the same place as both lowest and middle." First, the disk-theory of the earth would have the earth situated at the bottom of the universe. Hence, the translation should read: "The [disk-shaped] earth would have the lowest place [in the universe] - *mundus habeat infimum locum [universi]*". But secondly, the spherical theory of the universe would locate the global earth at the center of the universe, making the translation: "The [global] earth would have the middle place [in the universe] - *mundus habeat medium locum [coeli]*."

Augustine had scant patience with this latter upside-down world. "For," as he continues:

regarding that hypothetical world the advocates of antipodean people argue that the underside of the earth could not lack human habitation. But they do not reckon with the fact that even if the earth were believed to be gathered into a ball and be global in shape, or if this could be shown to be so by some reasoning, it does not follow that

77. My translation.

that (under)part of the earth would be devoid of waters. And even if it were so, it does not immediately follow that it contains people."⁷⁸

Moreover, as Augustine continues: "it is excessively absurd (*nimis-que absurdum est*) that it should be said that some men from this upper side had conquered the immensity of the Oceanus and had been able to sail and arrive in that lower part."⁷⁹ The reason for that excessive absurdity seems to lie in the fact that, as Augustine sees it, in that other world, *outside of this one*, one man would have gone there *and inaugurated another human race*.⁸⁰ But, with that race being in that other world, Augustine seems convinced that another human race would have to be saved there too, so necessitating another reenactment of the whole post-Adamic biblical history. Whence he sees the whole idea as excessively absurd (*nimis-que absurdum est*). Consequently, Augustine advocates searching for the pilgrimaging City of God on this, the real right-side-up world, and among the early people subsequently divided into the seventy-two tribes of the Bible,⁸¹ rather than searching for it on the supposed underside of the earth.

The antipathy of Augustine for the global shape of the earth was not at all unusual for his times. For one thing the global earth theory was especially elaborated by Aristotle who, despite his brilliance, was quite out of fashion in Augustine's milieu.⁸² For another, Augustine lived in

78. "Et ex hoc opinantur alteram terrae partem, quae infra est, habitatione hominum carere non potest. Nec attendunt, etiamsi figura conglobata et rotunda mundus esse credatur, sive aliqua ratione monstretur. Ut etiam ex illa parte ab aquarum congerie nuda sit terra. Deinde etiamsi nuda sit, neque hoc statim necesse esse, ut homines habeat." (*Ibid.*).

79. *Ibid.*

80. "Ut etiam illic ex uno illo primo homine genus institueretur humanum." (*Ibid.*).

81. "Qua propter inter illos tunc hominum populos, qui per septuaginta duas gentes et totidem linguas colliguntur, fuisse divisi, quaeramus, si possumus invenire illam in terris peregrinantem ciuitatem Dei." (*Ibid.*). From the context, it would appear that Augustine's Bible had it that the men connected with building the tower of Babel (Gen. 11.4-9) were divided into seventy-two tribes, each speaking a different language and that their descendants still peopled the earth.

82. As Augustine comments on the followers of Aristotle (the Peripatetics): "The most notable philosophers of modern times have rejected the title of 'Peripatetics' or 'Academics', and have elected to be called 'Platonists'." (*ciu. Dei* 8.12 of about 416). See also Pierre Duhem, *Le système du monde*, Paris: Hermann, 1965, tome 2, 412.

the somber age of the collapse of the Roman Empire, of which age, Dreyer observes (perhaps somewhat melodramatically) in his book on the history of astronomy:

But even before the days when enemies from outside had begun to assail the Roman Empire, a fierce onslaught had commenced on the results of Greek thought. A narrow-minded literal interpretation of every syllable in the Scriptures was insisted on by the leaders of the Church, and anything which could not be reconciled therewith was rejected with horror and scorn.⁸³

Among such men, Lactantius was reckoned as "the first and worst of the adversaries of the rotundity of the earth."⁸⁴ As was just seen, Augustine was not primarily repelled by any notion of the injustice inflicted upon all those people possibly having to live upside down,⁸⁵ which seems to have been the main objection of his fellow-African, Lactantius.⁸⁶ For Augustine, the guiding light in such matters was not the convenience of humanity, but rather the word of God as revealed in Scripture and, it was the absence of any such information favoring a global earth which ultimately seems to have determined his stand on the matter.

Basil, like Ambrose,⁸⁷ adopted a more moderate stance than Lactantius. The use of the Scriptures by some other church fathers when interpreting the nature of the universe, resulted in the popular tabernacle theory (from Ex 25.9ff.).⁸⁸ Again, Kosmas, surnamed Indicopleustes, writ-

83. J. L. E. Dreyer, *A History of Astronomy from Thales to Kepler* (Dover) 1953, p. 207 (hereafter: Dreyer 207). Cf. BA 48.598-601. For purposes of comparison, an interesting article on the shape of the earth in seventh-century Visigothic Spain just came to hand while working on this article. See W.M. Stevens, *art. cit.*

84. Dreyer, 209.

85. Pliny observes that in antiquity, the question about people possibly living on the under side of the earth was the subject of an immense fight between the learned and the unlearned (*Natural History* 2.65).

86. *Divine Institutions* 3.24. Cf. Dreyer, 209.

87. See BA 48.598.

88. Dreyer, 211ff.

ing in the sixth century maintained that the earth was so unspeakably heavy that it could only find rest at the very bottom of the universe.⁸⁹

6. Terrestrial Dynamics

While Augustine's journeys in the *Confessions* were merely mentioned in passing,⁹⁰ there were however other kinds of physical journeys in his writings which he did sometimes consider significant enough to merit the direct focus of his attention. These were the journeys of bodies to find their own proper places in the universe; an area of knowledge in which he drew upon the findings of the ancient Greek physicists. In particular, the four elements of earth, water, air and fire,⁹¹ when carried away from their own proper places in the world, were continually trying to return to them.⁹² Thus, fire moved upwards, while a stone, being composed of earth, when thrown up in the air strove to return to the earth where it belonged.⁹³

It is important to realize that the dynamics of this example differed radically from the perspective of modern physics. This latter viewpoint sees the stone as essentially a passive object, being pulled back to the earth again by the force of gravity from the earth itself which thereby becomes the net active source of the motion. But in ancient physics the stone *moved itself* back to the earth, propelled by a sort of animistic longing to return to its own proper place in the universe.⁹⁴ This *motility*,⁹⁵ or *intrinsic force* in a displaced body is what Augustine means by weight. So accordingly he says: "By reason of its weight *the body strives* to return to its own place - *corpus pondere suo nititur ad locum*

89. *Ibid.* 214ff.

90. *I.e. Conf.* 3.1.1, 5.8.14, 5.13.23 & 9.8.17.

91. Plato, *Tim.* 48b-, Aristotle, *Meteor.* 1.2. Cf. *BA* 48.614-622. This enduring theory of the four elements, derives of course from Empedocles.

92. *DGnL* 2.2.5-2.3.6. Cf. *Tim.* 52b-. & *BA* 48.595. Also for the ancient philosophers on the interactions of the four elements with each other see Taylor 1, 240, n. 11.

93. *Conf.* 13.9.10.

94. See note 24 above and corresponding text.

95. An active principle as "exhibiting or capable of movement." (See Webster's).

suum.⁹⁶ This proper place is determined by the nature of the body, for as Augustine continues:

Fire tends upwards; a stone downwards. They are impelled by their own weights, they seek their own places. Oil poured out beneath water is raised up above the water.⁹⁷ Water poured on top of oil sinks beneath the oil. They are impelled by their own weights; they seek their own places.⁹⁸

It follows then that Augustine's concept of weight has no relation to the modern idea of the measure of matter in a body. Rather does he understand it as an intrinsic force depending on the nature of the body, causing it to want to remain in its own proper place in the universe, or to strive towards that place when it is not so located. This dynamic concept of weight also applies in a certain manner to the human soul thereby giving rise to the famous *pondus* metaphor of Augustine. The proper place of the earth is at the very bottom of the universe. The proper place of water is above earth,⁹⁹ while air belongs above water and fire above air.¹⁰⁰ Finally, above the region of air is that of the ether.¹⁰¹ For Augustine this order of the elements means that the higher an element, the higher its motility or ability to actively *move itself*, as just seen. Thus, water (*as a moving principle*) moves itself more easily than earth (which is more passive) and air more so than water, and fire than air, while ether was considered the most active moving principle of all the elements.¹⁰² Hence one translation of the *De Genesi ad litteram (imperfectus liber)* fails to give adequate understanding of motility, when it says:

96. *Conf.* 13.9.10. Italics are added in the English passage. Cf. *ciu. Dei* 19.13.

97. *Conf.* 7.10.16 & *DGnL* 2.1.2.

98. *Ibid.* Cf. Air released under water will bubble up to the top of the water (*DGnL* 2.2.5). See also note 24 and its corresponding text above.

99. *DGnL* 2.1.3.

100. *DGnL* 2.2.5 & 2.3.6 respectively.

101. *DGnL(imp)* 4.14.

102. *Ibid.*

Air can surely be moved [*sic*] more easily than water. And we believe quite reasonably or perceive that ether can be moved more easily than air.¹⁰³

This rendition betrays no awareness of the above-mentioned motility, or *intrinsic active force* for motion which the ancients imputed to the various elements. On the contrary, like the modern theory of gravity, it conceives of them *as passive*. It therefore implies that the *higher* the natural place of an element in the vertical universe, the *more passive* it is! In actual fact, the very opposite should apply. Indeed, as Augustine points out, fire and air are more active than water and earth in which the passive influence dominates.¹⁰⁴ A better translation of the above passage would therefore be: "Air is surely a more active moving principle than water, and that ether is similarly more active than air is not absurdly believed or sensed."

And this is precisely what is shown in the very next sentence of the translation, where the elements are rendered as *active*: "For these elements [air and ether] are thought rather to have the power of acting, while earth and water that of being acted upon."¹⁰⁵

Finally there is the particular case of the interactions of the immaterial human soul with its material environment. For Augustine the soul would use as initial intermediary in the body, the element closest to it by nature, consequently the immaterial principle of soul, when sensing through the body, begins the action of all the senses with the fineness of fire, the most active of the four elements,¹⁰⁶ but the final *terminus ad quem* in the descending order of materiality of each sense is increasingly and correspondingly passive, as in the cases of sight (fire's light), hear-

103. "Et aer quidem mobilior est quam aqua; aether autem mobilior ipso aere non absurde creditur, aut sentitur." (*DGnL(imp)* 4.14). The translation is by Teske.

104. "Duobus superpositis, aqua scilicet et terra, uno autem superposito, id est igne sidereo: distribuuntur enim elementa ad patiendum duo, humor et humus; ad faciendum autem alia duo, aer et ignis." *DGnL* 3.10.14.

105. "Magis enim haec elementa [aer et aether] vim creduntur habere faciendi, terra vero et aqua patiendi." (*DGnL(imp)* 4.14.)

106. "Anima tamen cui sentiendi vis inest, cum corporea non sit, per subtilius corpus agitatur vigorem sentiendi, inchoat itaque motum in omnibus sensibus a subtilitate ignis." (*DGnL* 3.5.7).

ing (a more fluid air), smell (a humid exhalation), taste (a thicker liquid) and touch (an earthy mass).¹⁰⁷

7. Augustine and the Night Sky

Despite its enormous size and human importance, in Augustine's cosmography the earth always suffered by comparison with the corporeal heavens by being at the very bottom of the universe and also by being the location of corpses and of the infernal regions. By contrast, Augustine was permanently enthralled by the majestic grandeur of the nocturnal heavens. Understandably therefore, and as the *Confessions* repeatedly informs us,¹⁰⁸ he was for some "nine years" a member of the Manichees¹⁰⁹ who worshipped the sun and moon as divine beings.¹¹⁰ As a light-worshipping Manichee, while studying rhetoric in Carthage Augustine's fascination for the night sky also caused him to become an ardent student of astrology.¹¹¹

After he had rejected both Manicheism and astrology, his fascination with the night sky continued. He well appreciated the words of the psalmist: "The heavens are telling the glory of God; and the firmament proclaims his handiwork."¹¹² In several places in his writings heaven and earth are contrasted as the soul and the body respectively.¹¹³ The relation between heaven and earth seems to have been influenced by Is 66.1: "Thus says the Lord: 'Heaven is my throne and the earth is my footstool'."¹¹⁴ Understandably therefore, far more important to

107. *DGnL* 3.4.6, 3.5.7 & 7.15.21.

108. *Op. cit.* 3.11.20; 4.1.1 & 5.6.10.

109. As mentioned above, it was more like ten, or even eleven, years. But for a new interpretation of this sojourn, see Leo C. Ferrari, "Young Augustine; Both Catholic and Manichee," *Augustinian Studies* 26/1 (1995): 109-128.

110. *Contra Faustum Manichaeum* 9.2, 14.11-12 & 16.10.

111. *Conf.* 4.3.4-5.

112. From Ps 18.1. In the earlier works this is found in *Conf.* 13.19.25 and *Adnotationes in Job* 37.

113. *Sermo* 56 5.8 (410-412), *Sermo* 57 6.6 (410) & *Sermo* 58 3.4 (412-416).

114. This verse, or Matthew's citation of it (Mat 5.34-35) occurs thirty-two times in the writings

Augustine than earthly beauties were the beauties of the heavens. Accordingly, in the *Soliloquies* he has Reason address him as follows: "You are enraptured by the beauty and splendor of the heavens rather than by that of the earth."¹¹⁵

Augustine's fascination with the denizens of the nocturnal heavens is also indicated by several chance remarks elsewhere in his writings. Thus, in one of his first works, *The Happy Life* of 386, he refers to himself as having been led astray (and into the heresy of Manicheism) because he had his eyes fixed on those stars that sink into the ocean.¹¹⁶ Indeed, identification of the most prominent stars seems to have been an interest of Augustine, since in the same place also, referring to his voyage to Milan from his native North Africa, he says: "And now I have come to this land; here I have learned to know the North Star."¹¹⁷

Continual, even nightly, fascination with details of the night sky is evidenced by another work of the same period, when Augustine says: "Compared with the stars, what is more insignificant than my dinner? Yet I do not know what I am to have for dinner tomorrow, but I avow without conceit that I know in what sign the moon will appear."¹¹⁸ Finally, some thirty-four years later, Augustine betrays occasional, concentrated interest when he says of the night sky: "The more closely one looks, the more stars one sees."¹¹⁹

Other evidence also suggests that Augustine's fascination with the night sky was so powerful that he even came to believe that human beings were uniquely fashioned as upright animals for frequently contem-

of Augustine.

115. *Op. cit.* 1.5.11 (translated by T.F. Gilligan O.S.A.).

116. *De beata vita* 1.4.

117. *Ibid.*

118. *Soliloquia* 1.3.8 (386). Cf. *Contra Academicos* 1.8.22 (386) and Marcus Aurelius' *Meditations* 7.47 & 11.27. This habit of star-gazing was apparently fairly common among the middle Platonists of the first two centuries of the Christian era. See chapter 13 of *An Introduction to Ancient Philosophy* by A.H. Armstrong, London: Methuen 1968.

119. My translation. (*ciu. Dei* 16.23 of about 420).

plating the nocturnal heavens and so thereby be reminded of their heavenly destiny above and beyond the stars:

Even our body has been made so that it reveals that we are better than the beasts and, for that reason, like God. For the bodies of all the animals which live either in the waters or on the earth, or which fly in the air, are turned towards the earth and are not erect as is the body of man. This signifies that our mind ought to be raised up towards those things above it, that is, to eternal spiritual things. It is especially by reason of the mind that we understand that man was made to the image and likeness of God, as even the erect form of the body testifies.¹²⁰

Accordingly, carnal and spiritual persons were characterized by their differing interests in earthly, and in heavenly bodies respectively, so that as Augustine observes:

While reason esteems celestial bodies as greatly superior to terrestrial ones, who among carnal men would not prefer that many stars were missing from the sky, rather than a single bush were missing from his field, or a cow from his herd?¹²¹

This inherently superior nature of heavenly bodies was also relevant to Augustine's opinion on the nocturnal voyage of the sun, as will be seen below. Meanwhile, Augustine's high regard for the heavens and his contempt for the earth provide a polarizing field for his attempts at mys-

120. From the Teske translation: *Two Books on Genesis against the Manichees* (see note 46 above) 1.17.28. As Teske points out in a footnote, this idea was commonplace in the ancient world. The Latin is: "omnium enim animalium corpora, sive quae in aquis, sive quae in terra vivunt, sive quae in aere volutant, inclinata sunt ad terram, et non sunt erecta sicut hominis corpus. Quo significatur, etiam animus nostrum in superna sua, id est in aeterna spiritualia, erectum esse debere. Ita intelligitur per animum maxime, attestante etiam erecta corporis forma, homo factus ad imaginem et similitudinem Dei." Cf. *ciu. Dei* 14.4, 11 & 27 (418-420), as also 22.24.4 (ca. 427). Cf. *Eccles* 7.29. On the divine nature imputed to the stars by the Pythagoreans, see Dicks 73. See also C. S. Lewis on the vertical character of the heavens to the medieval mind as described in the fifth chapter of his *The Discarded Image*.

121. "Quis tamen carnalium hominum non mallet, vel plura deesse in coelo sidera, quam unam arbusculam in agro suo, aut vaccam in armento?" *De libero arbitrio* 3.5.17 (391-395), (my translation). But some few years later, he had occasion to castigate those astronomers who were full of knowledge about the stars, when their learning only puffed them up with pride (*Conf.* 5.3.3-6).

tical vision. A significant element in these descriptions is the element of rising upwards contained in Augustine's accounts of mystical experiences. The most obvious example is the well-known vision of Ostia¹²² which will be examined below.

8. The Shape of the Sky

Modern scholars assumed too easily that for Augustine the shape of the heavens was spherical like the modern notion. Thus, J. H. Taylor seems to have translated the entire *De Genesi ad Litteram* while thinking that Augustine believed that the sky was spherical, because it encompassed the central, global earth. Accordingly, Taylor says: "The Greeks and Romans commonly held that the heavens were spherical, that in the center of this great sphere was the earth."¹²³ Likewise, Agaësse and Solignac also imply that like the scientists of his time, Augustine believed that the earth was a globe at the center of a spherical heaven, while the notion of a disk-shaped earth was held only by the uneducated.¹²⁴ It is therefore important to realize that contrary to the opinions of the above modern scholars, as regards the shape of the earth Augustine lined himself up with the uneducated.

Part of his reason for this alliance was his conviction from the Bible, that the earth and heaven constituted the two biggest parts of the universe. The earth therefore had to be essentially flat so that the shape of the heavens was that of an inverted dish of which the shape was in general conformity with appearances. This dish-shaped sky fitted over the essentially flat earth, and so the visible heavens shared with the earth the distinction of being the other biggest part of the universe.

122. *Conf.* 9.10.23-26. See also 7.10.16 & 7.17.23.

123. Taylor, I, 233, n. 25.

124. "L'autre opinion, qui fait du ciel un disque superposé à la terre sur une seule de ses faces semble représenter seulement la croyance empirique du vulgaire." (BA 48.598). Much earlier it was supposedly also the belief of the Ionians in general. See Dreyer 11-17. At any rate, it would seem that with the exception of the atomists, Leucippus and Democritus, from the fourth century BC, the Pythagorean notion of the spherical shape of the earth was generally accepted by reputable Greek thinkers (Dicks 51 & 72).

Augustine saw the credibility of Scripture threatened by the theories of the natural philosophers about the shape of the sky, or heaven.¹²⁵ Therefore in the second book of the *De Genesi ad litteram*, he raises the question of what should be the Christian belief about the shape of the sky (*coelum*), according to sacred Scripture.¹²⁶ The very question shows Augustine using the Bible to interpret the physical world. Indeed, the question had been much discussed among the earlier church fathers,¹²⁷ and probably because of the sublime nature imputed to the visible heavens.

On the other hand, Augustine did make the semblance of a concession to his pagan opponents and observes that while the writers of the sacred Scriptures knew the truth of the matter about the shape of the physical heavens, God did not wish to teach men such things which were irrelevant to their eternal salvation.¹²⁸ At least this temporarily saved him from having to agree with either view on the shape of the heavens, while preserving for Scripture the priority that he thought it should have.

But apparently the lofty nature of the physical heavens foregrounded the question of their shape as important for believers.¹²⁹ Augustine points out that many argued much about these questions, but the writers of the sacred Scriptures wisely omitted this matter as "such subjects are of no profit for those who seek beatitude, and, what is worse, they take up very precious time that ought to be given to what is spiritually beneficial."¹³⁰ Then, as if to dispose of the question once and for all, he observes in a very personal and impatient vein:

125. This is one of the rare cases where Augustine seems at first to take care not to endanger the approach of any non-believing philosophers to the christian faith (see note 28 above). In actual fact, it is at best a token concession, as will be seen.

126. *Op. cit.* 2.9.20.

127. See *P[atrologia] L[atina]* 6.427.

128. "Breviter dicendum est de figura coeli hoc scisse auctores nostros quod veritas habet; sed Spiritum Dei, qui per ipsos loquebatur noluisse ista docere homines nulli salutis profutura." (*DGnL* 2.9.20). Cf. *BA* 48.598.

129. "Quaeri etiam solet quae forma et figura coeli esse credenda sit secundum Scripturas nostras." (*DGnL* 2.9.20). See also *BA* 48.598-600.

130. "Multi enim multum disputant de iis rebus quas maiore prudentia nostri auctores omiserunt,

What concern is it of mine whether heaven is like a sphere and the earth is enclosed by it and suspended in the middle of the universe, or whether heaven like a disk (*velut discus*)¹³¹ above the earth covers it over on one side?¹³²

However, the matter did not rest there, for apparently some believers still saw the notion of a spherical heaven as being in conflict with the psalmist's question: "Who stretches out heaven like a skin?" (Ps 103.2).¹³³ Augustine's reply was that the proposed spherical shape of the heaven was to be denied if it was opposed to the word of God in Scripture. This implication is emphasized in the sentence which follows in the text: "The truth is rather in what God reveals than in what groping men surmise."¹³⁴

This statement again indicates Augustine's conviction about the superiority of sacred Scripture to human opinions when it was a question of the constitution of the visible heaven, or sky. And this position seems quite logical, because for Augustine God was the author both of Scripture and of the universe. Therefore, one could consult the Scriptures for

ad beatam vitam non profuturas discentibus; et occupantes, quod pejus est, multum pretiosa, et rebus salubribus impendenda temporum spatia." (*DGnL* 2.9.20). Cf. 2.14.34. See also *BA* 48.598.

131. Taylor's translation of *discus* here by "disk" (Agaësse and Solignac use "disque") is the first and obvious meaning of the Latin word (see Lewis & Short) but on second thought, lacks appreciation of Augustine's cosmography because one usually tends to think of a disk as circularly round and flat. But as will be seen later in this study, Augustine does not think of the physical heaven as round and flat, but rather shaped like a dome, or inverted dish. Therefore, in view of his cosmography, the second meaning of *discus* in Lewis & Short would apply, namely "dish", with its concave surface facing downwards towards the earth. On the other hand, corresponding to such a dish-shaped heaven, there could be a *disk-shaped earth* which probably helped cause Taylor's word-choice.
132. *DGnL* 2.9.20. The Latin is: "Quid enim ad me pertinet, utrum coelum sicut sphaera undique concludat terram in media mundi mole libratam, an eam ex una parte desuper velut discus operiat?" On both the above possibilities see *BA* 48.598-600. As already noted, Agaësse and Solignac impute the disk-theory to the common people (*BA* 48.598). In actual fact, this would seem to resemble the view of Augustine himself, as will be seen.
133. "Sed ait aliquis, quomodo non est contrarium iis qui figuram sphaerae coelo tribuunt, quod scriptum est in Litteris nostris, 'Qui extendit coelem sicut pellem?'" (*DGnL* 2.9.21). See also *BA* 48.599.
134. "Hoc enim verum est quod divina dicit auctoritas, potius quam illud quod humana infirmitas conjicit" (*DGnL* 2.9.21).

information about the mysteries of the universe, particularly about its more sublime regions like the heavens. This probably accounts for his resentment of those astronomers who did not regard the heavens with spiritual insight.

Regarding the spherical theory of the heavens, Augustine would accept it only when it could be demonstrated by indubitable proofs,¹³⁵ though exactly what he meant by those indubitable proofs is not spelled out. In any case, Augustine then counters that *if* such proof about the sphericity of the heavens were absolutely certain, only then would it be incumbent upon him to show that his opinion that heaven was stretched out like a skin was not incompatible with the notion of the celestial sphere.¹³⁶ And if such a contradiction were found, continues Augustine, there would also be a contradiction between the text which sees heaven as stretched out like a skin and another place in Scripture where it is suspended over earth like an arched roof (*camera*).¹³⁷

Augustine considered it most important that this passage and the previous one (from Ps 103.2) about heaven being stretched out like a skin, should be interpreted in such a way as to show that there was really no contradiction between them, and therefore no contradiction in the word of God. Here he was on more comfortable ground, having at his disposal all the resources of imagery and exegesis. But the problem of the shape of the heavens still haunted him, for farther along in the text, regarding a spherical heaven surrounding the earth, he observes of both the above scriptural passages (Is 40.22 & Ps 103.2):

135. Writing of those who may be described as the celestial sphericalists, he says: "Sed si forte illud talibus illi documentis probare potuerint, ut dubitari inde non debeat." (*DGnL* 2.9.21).

It is noteworthy that the Cicero, whose style was so much admired by Augustine (*Conf.* 3.4.7) believed that the earth was a sphere at the center of the universe (*De republica* 3.7.15).

136. Thus, Augustine continues from the previous quote: "demonstrandum est hoc quod apud nos de pelle dictum est, veris illis rationibus non esse contrarium." (*DGnL* 2.9.21).

137. "Alioquin contrarium erit etiam ipsis in alio loco Scripturis nostris, ubi coelum dicitur velut camera esse suspensum." (*Ibid.*). That other place in scripture is Is 40.22 secundum LXX. Taylor has translated *camera* by the ambiguous and obsolete word "vault", whereas "dome" or "dome-shaped" or "inverted dish" seems much clearer. The stars directly overhead would seem to be the highest, and those near the horizon the lowest. No resemblance to the fully global shape of a geodesic dome is intended, but rather a concavity as suggested by appearances.

It is also necessary that both of these passages should not contradict the theories that may be supported by true evidence, by which heaven is said to be curved on all sides in the shape of a sphere, provided only that this is proved.¹³⁸

Again therefore, Augustine does not stipulate what he means by "true evidence (*certa ratio*)" and the extract ends with the limiting condition regarding the spherical shape of the physical heaven: "provided only that this is proved - *si tamen probatur*." This implies that he regarded the Aristotelian-Ptolemaic cosmography with its global earth in the center of the spherical heaven as merely hypothetical.

Meanwhile however, by his very wording Augustine subsequently again betrays a personal preference for the dome-shaped heavens when he observes: "*Our* picture of the heavens as a dome, even taken in a literal sense, does not contradict *those* who say it is a sphere."¹³⁹ Then he observes that this latter opinion would be credible according to that part which was above our heads, if Scripture wished to describe that particular part of it (the heaven),¹⁴⁰ so that

If therefore it [the heaven] is not a sphere, it is a dome on that side on which it covers the earth; but if it is a sphere, it appears dome-shaped at all points around it [namely, the supposed global earth].¹⁴¹

Augustine then drops the matter and proceeds to deal with the more difficult problem of reconciling the notion of a spherical heaven with Ps 103.2 which has the heaven stretched out like a skin. In the course of this reconciliation he has occasion to make the revealing remark that the no-

138. "Ita oportet etiam utrumlibet horum illis non adversari disputationibus, si eas forte veras certa ratio declaraverit, quibus docetur coelum sphaerae figura undique esse convexum, si tamen probatur" (*DGnL* 2.9.21).

139. *DGnL* 2.9.22: "Et illa quidem *apud nos* camerae similitudo, etiam secundum litteram accepta, non impedit *eos* qui sphaeram dicunt." (Italics are added). Augustine may have been influenced here by Gen 1.6 where God created the sky (*coelum*) which Augustine regarded as shaped like an inverted dish.

140. "Bene quippe creditur secundum eam partem quae super nos est, de coeli figura Scripturam loqui voluisse." (*Op. cit.* 2.9.22).

141. (My translation.) (*Ibid.*). The Latin is: "Si ergo sphaera non est, ex una parte camera est, ex qua parte coelum terram contegit; si autem sphaera est, undique camera est."

tion of a spherical heaven surrounding the earth "may be only a man-made theory - *quod humanum est forte commentum*."¹⁴² Therefore, if, as seems implied by the mention of the spherical heaven, the Aristotelian-Ptolemaic universe with its central global earth surrounded by that spherical heaven, were known to Augustine, it was not accepted as *the* truth, but only as a man-made theory lacking true evidence which presumably for him would be some basis in Scripture.

The bottom line is therefore that Augustine's sympathies lay rather with the notion of a dome-shaped sky and its corresponding disk-shaped idea of the earth, as was shown above.

9. The Various Heavens

Augustine distinguishes at least three¹⁴³ hierarchically (*i.e.* vertically) ordered kinds of heaven (*coelum*).¹⁴⁴ First, "heaven" was said generally of the whole corporeal heavens (including the stars) above the earth; secondly, and higher up, the name was applied to what is the object of spiritual vision¹⁴⁵ seen in bodily likeness.¹⁴⁶ Last and most importantly for Augustine, "heaven" was said of that invisible heaven named by him as the Heaven of heaven (*Caelum caeli*) and which was only visible to the mind entirely separated from, and purified of, the senses.¹⁴⁷

142. "Sed illud quod de pelle dictum est, magis urget, ne non sphaerae, quod humanum est forte commentum, sed ipsi *nostrae* camerae adversum sit." (*Ibid.*). The added italics in the cited text here show yet again Augustine's preference for the notion of a dome-shaped sky. Also, it is noteworthy that *commentum* is from the verb *comminiscor* meaning to devise something by careful thought, to contrive, invent, or even to feign. (See Lewis and Short, 378, col. 3).

143. Augustine does concede that there may indeed be more than three heavens (*DGnL* 12.29.57). See also Taylor, 2, 315, n. 152. It is noteworthy that according to Augustine, a heretical sect known as the Basilidiani claimed that there were 365 heavens; one for each day in the year (*De haeresibus ad Quodvultdeum* 4 of 428).

144. *DGnL* 12.34.67. On the three heavens, see Taylor 2, 300, n. 3 & 2, 315, n. 152. See also *BA* 49.575-585.

145. For the special meaning of "spirit" in the *DGnL* see Taylor 2, 301, n. 13 & 302, n. 15.

146. From this heaven came the dish full of living creatures which Peter saw in his vision (Act. 10.10-12). (*Cf.* *DGnL* 12.34.67). The context identifies this as the second heaven, but whether this is the ethereal region of the stars is not yet clear to me, but see Taylor 2, 300, n.3.

147. *DGnL* 12.24.67.

The Heaven of heaven was so named because compared with it the first heaven was as earth.¹⁴⁸

The heaven, or sky, which is the principal subject of this present treatise is the first heaven, being "The whole corporeal heaven (to use a general term), namely all that is above the waters and the earth"¹⁴⁹ and which would therefore include the stars. For Augustine, this corporeal heaven consisted of several ascending layers which will be explained in order. First, and closest to the earth with its oceans and rivers, was a layer of misty air which was therefore considered thicker or denser than pure air¹⁵⁰ because of the moisture that it contained. This moisture formed clouds in the upper reaches of that air.¹⁵¹ For Augustine, this increased density meant that this lower air could therefore sustain the flight of birds,¹⁵² since (from Gen 1.20) he thought that they were formed from water.¹⁵³ From information in Scripture regarding the Great Flood (Gen 7.20), Augustine thought that this region of misty air extended up to 15 cubits (22 to 25 feet) above the highest mountains.¹⁵⁴

148. "Sed ad illud coelum coeli, etiam terrae nostrae coelum terra est" (*Conf.* 12.2.2). For further information, see J. Pépin "Recherches sur le sens et les origines de l'expression 'Caelum caeli' dans le livre XII des *Confessions* de saint Augustin," *Archivum latinitatis medii aevi* (Bulletin du Cange) 23 (1953): 185-274, as well as *BA* 48.586-588. For more recent considerations, see Jacobus C. M. van Winden, "Once again *Caelum Caeli*. Is Augustine's Argument in *Confessions* XII Consistent?" *Augustiniana* 41 (1991) (Mélanges T. J. van Bavel): 905-911. See also O'Donnell 3.302-303.

149. *DGnL* 12.34.67.

150. The Manichees, among whom Augustine numbered himself for some "nine years" (*Conf.* 4.1.1), thought that air occupied the entire universe (*C. Faust. Man.* 20.8 of 397/398) and was the dwelling-place of the Holy Spirit (*Ibid.* 20.2 & 7).

151. That clouds consisted of very fine droplets of water was demonstrated by walking on mountain tops among clouds, or even in foggy fields, when condensation of drops of moisture occurred on the clothes (*DGnL(imp)* 14.44 & *DGnL* 2.4.7-8).

152. Cf. Gen 1.20. Augustine thought that the water vapor from the sea and rivers thickened the air nearer the ground. See *De Genesi contra Manichaeos* 1.15.24 (388/9) and *Conf.* 13.32.47. On Augustine's symbolism of birds see Taylor 1, 231, n. 72.

153. Cf. *Conf.* 13.23.34. As Taylor points out (1, 239, n. 1), the septuagint (used by Augustine), gives this impression, which is not implied by the original Hebrew. Also on the subject of moisture, the elements of earth and water (as well as rotting corpses) were believed to be capable of generating certain small plants and animals which could therefore reproduce without seeds, or semen (*DGnL* 3.12.19 & 3.14.22-23).

154. *DGnL* 3.2.2. See also *BA* 48.615. Here is another case of Augustine using Scripture as a

This same moisture-charged air was subject to turbulence (like the oceans), and storms and lightning.¹⁵⁵

Augustine therefore saw the terrestrial waters as having two natural regions for two different kinds of animals:

To these waters two places have been given: on earth in the rivers and seas, above the earth in the currents of air. The one is for fish, the other for birds.¹⁵⁶

Probably because of its moisture content and mutability, Augustine considered this lower layer of air to be included in the items covered by the term "earth":

"Earth" therefore is applied in general to all this lower region, including, in descent downwards, 'fire, hail, snow, ice, stormy winds, and all the deeps'[Ps 148.7-8] until we come to the dry element that is called earth in the strict sense.¹⁵⁷

Most significantly, the lower misty air was also the prison of the aerial demons, or rebellious angels which had been cast out of the heights of heaven and had fallen into the lowest heaven of that misty air.¹⁵⁸ Since their bodies were made of air, they were very subtle and effective deceivers of the human race.¹⁵⁹ Augustine stipulated that the spatial ele-

source of natural science.

155. *DGnL(imp)* 14.44 & *DGnL* 3.6.8.

156. *DGnL* 3.7.9.

157. *DGnL* 3.6.8. Cf. 2.13.27 & 3.7.9.

158. "Superior vero pars aeris...[i]n qua fortassis parte si fuerunt ante transgressionem suam transgressores angeli." (*DGnL* 3.10.14). The wording implies hesitation about location in the aerial part of heaven. Cf. the words of Christ: "I saw Satan fall like lightning from heaven." (Luc 10.18). See also Eph 2.1-2 & 6.12. Cf. *DGnL* 3.10.14-15 & 11.26.33; *De divinatione daemonum* 3.7 (406-411); *ciu. Dei* 11.33 (ca. 417); *Quaestiones in Heptateuchum* 4.29 (419) & *En. in ps.* 148.9. See also Taylor 1, 243, n.32 & 244, n. 34.

159. *Contra Academicos* 1.7.20, *De ord.* 2.9.27 & *DGnL* 2.17.37. Cf. *De div. daemon.* (406-411). See also Taylor 2, 307, n. 64 & 309, n. 81. Indeed, early in his career Augustine believed that in accord with divine Providence the lower part of the universe was subjected to the demons (*De doctrina christiana* 2.23.35 of 396). See also A.-M. La Bonnardière, "Le combat chrétien. Exégèse augustinienne d'Ephes. 6.12," *Revue des Etudes Augustiniennes* 11

vation of the demons in the air did not make them better than humans,¹⁶⁰ though significantly enough in this regard, following Peter, he later consigned them (from about 417 on) to the netherworld,¹⁶¹ a position more compatible with the gradations in his vertically/spiritually ordered universe.

Above the lower aerial layer capped by its clouds, was the region of pure and tranquil air.¹⁶² A sign of the purity of this higher air was that birds could not fly in it, so that presumably it lacked moisture.¹⁶³ Furthermore, the fact that it harbored no tempests and lightning vouched for its tranquility and so for its nature as the lowest part of the next highest layer of the visible heaven, known as the celestial region¹⁶⁴ which contained the stars.

Augustine cites the opinions of some of his contemporaries to the effect that just as air seeks to rise to its natural place above water¹⁶⁵ so too, judging by the way that flames leaped eagerly upwards, some said that above the region of pure air there was pure fire which they thought was the source of stars and other shining bodies.¹⁶⁶ While Augustine did not commit himself to this belief, he saw that layer as the celestial region of tranquility consisting of that great "ethereal machine (*aetherea machina*)," containing all the stars.¹⁶⁷ Just as air was more fluid than water,

(1965): 235-238.

160. *Ciu. Dei* 8.15 & 22 of 415-417.

161. *Ciu. Dei* 11. 33 (ca. 417), 15.23 (418-420) & 21.23 (425-427). For Augustine's change in location of the demons, see Taylor 2, 294, n. 88. Paul maintained that they were in the air (Eph 2.2), while Peter saw them as located in the netherworld (2 Pet 2.4). It is noteworthy that the middle ages possessed an impressive variety of these aerial/terrestrial beings, but not all of them were malevolent. See C. S. Lewis, *op. cit.*, chapter 6.

162. *DGnL(imp)* 12.37 & *DGnL* 3.3.5, 3.10.14 & 15.

163. *DGnL* 3.6.8 & 3.10.14.

164. "Si quid vero tranquillae aeris est, ubi ventosi atque procellosi motus non possunt existere, ad coelestem partem pertineat." (*DGnL* 2.13.27).

165. *DGnL* 2.2.5.

166. "Itaque super aeram purus ignis esse dicitur coelum, unde etiam sidera atque luminaria facta coniectant." (*DGnL* 2.3.6). See also *BA* 48.595.

167. "Intellegendum est omnem istam aetheream machinam dici quae omnia sidera continet."

so was ether more so than air.¹⁶⁸ This ethereal region was presumably the second heaven.¹⁶⁹

Scripture names this ethereal region with all its stars the *firmament* (Gen 1.14-18) meaning literally for Augustine a strengthening or support.¹⁷⁰ This word occurs some 306 times in the works of Augustine, and some thirty times in the *Confessiones* alone, mostly in the last book, thereby manifesting a significant celestial goal to the work. Augustine maintains that the solidity of the firmament does not exclude its rotating,¹⁷¹ but in accord with his preference for an inverted dish-shaped heaven with a disk-shaped earth, such rotation would be understood to be confined to the horizontal plane, like the (flat) horizontally spinning potter's wheel used as a suitable example for the rotating heavens, as in the case of Nigidius the astrologer.¹⁷²

Besides containing all the stars, the other important function of the firmament (supposedly being solid), was to divide the earthly waters below it from the celestial waters above,¹⁷³ in accord with the words of Gen 1.6-7. However, an inconsistency occurs here in that this solidity hardly seems compatible with the extreme fluidity of the ether, as mentioned above. In view of this conflict, it is not surprising that towards the end

(DGnL (imp) 12.37). Cf. Conf. 13.19.24-25, *De Genesi contra Manichaeos* 1.14.20, DGnL 2.14.28-29.

168. DGnL(imp) 4.14. On Plato and Aristotle as the originators of the notion of the ether, see Dicks 142-143 & 199-200.

169. Taylor 2, 300, n. 3 & 2, 315, n. 152. Apparently, from this ethereal heaven was lowered the great sheet with its comestible contents which were the subject of Peter's vision (Act 10.10-12). Cf. "Coelum...secundum autem, in similitudine corporali quod spiritu cernitur, sicut illud unde animalibus plenus in ecstasi Petro discus ille submissus est." (DGnL 12.34.67).

170. See Lewis & Short 752. *Firmamentum* occurs about 40 times in the Bible.

171. DGnL 2.10.23. See also BA 48.600-601 & PL 6.426.

172. Ciu. Dei 5.3 (415).

173. As Augustine himself says: "Sunt aliae 'aquae super' hoc 'firmamentum,' credo, immortales, et a terrena corruptione secretae" (Conf. 13.15.18). See also *De Genesi contra Manichaeos* 1.11.17, DGnL(imp) 8.29-30, & DGnL 2.1.1-4 & 2.5.9. For the troubles these super-celestial waters caused the early Church fathers, see Dreyer, *op. cit.* 210ff., as also BA 48.593-598 and TeSelle, *op. cit.* 206.

of his life Augustine revoked his opinion about the dividing function of the firmament as having been an early decision impetuously made about a very obscure problem.¹⁷⁴

10. Sun and Moon

In a letter of the year 400 Augustine distinguished two very different kinds of interest in the stars:

But who can fail to perceive how great is the difference between useful observations of the heavenly bodies in connection with the weather, such as farmers or sailors make...and the vain hallucinations of men who observe the heavens not to know the weather...but merely to pry into the future and learn now what fate has decreed.¹⁷⁵

Less obvious however, was the difference between astrology and astronomy. As has been seen, Augustine exhibited a keen interest in the stars, not just for weather prediction, nor (temporarily) for the evil art of astrology (which tried to probe into the human future), but inasmuch as he regarded the stars as visible inhabitants of a spiritually superior realm. Where did this leave what moderns would call the science of astronomy? Augustine obviously drew upon his considerable knowledge of the astronomy of his age, but for him the spiritual significance of that superior world was far more important. The question therefore arises as to how much he may have modified that astronomical knowledge under the influence of his biblical literalism. The material which follows gives some interesting answers to this question.

Brightest by far of all the stars was the sun. Augustine attacked the opinions of some astronomers that there were still greater suns in the heavens, only they appeared smaller because of being further away from the earth.¹⁷⁶ For Augustine the matter had been settled by the words of

174. "In libro tertio decimo [*Confessionum*] quod dixi: 'Firmamentum factum inter spirituales aquas superiores et corporales inferiores', [*Conf.* 13.32.47] non satis considerate dictum est; res autem in abdito est valde." (*Retr.* 2.6(33).2).

175. *Ep.* 55 8.15 (J. R. Cunningham translation).

176. "Sed quod [sol et luna] diversis intervallis distent a terra, propterea diversa claritate magis minusque nostris oculis appareant." (*DGnL* 2.16.33-34). Cf. *Ep.* 14 3 (389). See also *BA*

Gen 1.16: "And God made the two great lights, the greater light to rule the day, and the lesser light to rule the night."¹⁷⁷

In a sermon of 396 Augustine gave the sun two possibilities for its nocturnal journey after sunset. Depicting the sun as a deficient image of the universal presence of the Word of God, Augustine asks his congregation what happens to the sun after sundown: "Does it at any time, either leave the lands and go under the lands, or does it go behind the lands?"¹⁷⁸ While the question is left unanswered, it shows Augustine's awareness of the two possible answers, in the case either of the global earth, or of the disk-shaped earth, respectively.

Augustine did not see the sun as passing under the disk-shaped earth during the night. Here again he looked to the Scriptures rather than to the natural philosophers for an explanation. Accordingly, about the year 404, in the *De Genesi ad Litteram* he wrote:

In the Book of Ecclesiastes it is written: "the sun rises, and the sun goes down and is brought to its place;" that is, to the place where it rose. And the author continues: "At its rising it goes forth to the south and [re]turns again to the north." (Eccles 1.5-6)¹⁷⁹

From these lines, it seemed to Augustine that it was day in his part of the world (North Africa) when the sun was in the south and night when the sun travelled around (*circumiens*) to the north (Europe) where it then became day. This should occasion no surprise. After all, as seen above, the disk-shaped earth was one of the two greatest bodies in the universe,

48.607-609.

177. "Et melius credimus ea [i.e. sol et luna] esse caeteris majora luminaria, quae sancta Scriptura ita commendat, 'Et fecit Deus duo luminaria magna'." (DGnL 2.16.34). See also the subtle point raised about Augustine's opinion, in BA 48.609.

178. "Aut aliquando deserit terras, et it sub terras, aut post terras?" (*Sermo 120 2* of 396).

179. "Nam et in libro qui appellatur Ecclesiastes, ita scriptum est: 'Et oritur sol, et occidit sol, et in locum suum ducitur'; hoc est, in eum locum unde ortus est. Sequitur enim, et dicit: 'Ipse oriens illuc vadit ad austrum, et circuit ad aquilonem'." (DGnL 1.10.21). Cf. The case of Anaximenes as cited by Dreyer, p. 16, as well as the quotation from Aristotle on p. 41 in Dicks. In both cases, the north was considered higher, so that presumably a mountain range would have prevented the sun's rays from reaching the south.

so that there were plenty of distant lands for the sun to visit after it went behind the nearest horizon.¹⁸⁰ As a result, there was always some place on the face of the earth where it was day, and another where it was night.¹⁸¹ From the above description of the sun's nocturnal voyage it seems that for Augustine the sun kept travelling around in very large horizontal circles or ellipses¹⁸² above the disk-shaped earth.¹⁸³

Since there was always some place on the face of the earth where it was day and another place where it was night, according to Augustine the only way that this could *not* be true would be if one indulged in "poetic fantasy" (*poeticum figmentum*) and said that the sun descended into the sea before going to another place. During that descent it would be night everywhere on the face of the earth.¹⁸⁴ But in this case, as Augustine says, there would still be daylight in the depths of the sea, since, as he claims in the text, the sun could not be extinguished by the waters. But yet he dismissed such a proposed sub-marine voyage of the sun as a monstrous idea - *monstruosum est*.¹⁸⁵

What was so preposterous about the poets' idea of the sun descending into the sea? The response is that in view of previous considerations, Augustine would have thought it preposterous for the sun to depart from its exalted and proper place in the heaven and descend, not only to the lowly level of the earth, but even to have gone down into the sea! This

180. Cf. the opinion of Anaximenes (Dicks 46). It is noteworthy that despite differing views on the shape of the heavens, the solar year of Augustine's time was estimated at 365 days and six hours (*DGnL* 2.14.29), which value (365.25 days) is remarkably close to the modern value of 365.26 days.

181. "Omnibus viginti quatuor horis non deesse per circuitum gyri totius, alibi diem, alibi noctem." (*DGnL* 1.10.21).

182. The plurals are used here to allow for the different circles, or ellipses for summer through winter.

183. Apparently all the stars also behaved in this manner.

184. Continuing on from the previous extract from the *DGnL* Augustine says that it would always be day somewhere on the earth: "nisi forte poeticis figmentis cor inclinandum est, ut credamus solem mari se immergere, atque inde totum ex aliqua parte mane surgere." (*Ibid.*). Cf. Dicks 30-31.

185. "Quamquam si ita esset, abyssus ipsa praesentia solis illustraretur, atque ibi esset dies. Posset enim et aquas illuminare, quando ab eis non posset exstingui. Sed hoc monstruosum est suspicari." (*DGnL* 1.10.21).

would spectacularly violate the inherently vertical subordination of terrestrial to celestial bodies in Augustine's universe, whence the above verdict: *monstruosum est*. What is also highly significant about this example is that Augustine has not even considered the possibility of the earth being spherical in shape.¹⁸⁶ If such were the case, with the sun going around to the other side of the earth, there would always be somewhere on the face of the earth where it would be daylight. Yet this possibility is not even mentioned in the above text.

Finally, since Augustine believed in a disk-shaped earth and also that the sun could not go under the earth, it would be interesting to see how he could reconcile these beliefs with the fact of lunar eclipses, when the earth intervenes between the sun and moon. However, I have been unable to find any such attempted explanation in his works.¹⁸⁷ On the other hand, the same problem would not have arisen in the case of solar eclipses, since for Augustine, both sun and moon were above the earth and with the former higher than the latter¹⁸⁸ when a solar eclipse would be possible, but which would prohibit a lunar eclipse.

11. The Other Stars

The nocturnal sweep of most of the stars across the heavens raised the question of whether the whole heavens moved, and if so, how was this compatible with the notion of the firmament as something firm, and so fixed.¹⁸⁹ On the other hand, if the firmament were firm and stationary, how could those fixed stars which were supposedly imbedded in it, ro-

186. Recall the options of *Sermo 120 2* (see note 216), with its possibility of the sun going under the earth or behind it: "aut [sol] aliquando deserit terras, et it sub terras, aut post terras?" However, as mentioned above, This was merely posed as a question and of the two possible answers, the latter is the one favored by Augustine.

187. Both solar and lunar eclipses were acknowledged by Augustine, but without any attempted explanations. Writing of the astronomers of his age, he says: "Mente sua enim quaerunt ista et ingenio, quod tu dedisti eis, et multa invenerunt et praenuntiaverunt ante multos annos, defectus luminarium solis et lunae." (*Conf.* 5.3.4).

188. It was considered that the longer the period of a planet, the higher it was above the earth. Since the sun takes a year to complete its orbit, while the moon requires only a month (*DGnL* 2.5.9) therefore the former should be much higher.

189. "De motu etiam coeli nonnulli fratres quaestionem movent, utrum stet an moveatur. Quia si movetur, inquit, quomodo firmamentum est?" (*DGnL* 2.10.23).

tate from east to west?¹⁹⁰ Moreover, this broad sweep across the night sky contrasted uncomfortably with the small circlings of the Wain, also known as the Great/Little Bear.¹⁹¹ This circling suggested the nearby location of a turning-point in the night sky.¹⁹²

Two possibilities presented themselves to Augustine: either the nocturnal heaven was a rotating sphere (implying also a spherical earth) and the other turning point in the night sky was out of sight,¹⁹³ or else the heaven was a rotating (and inverted) dish (*discus*), (and so, suspended over a disk-shaped earth) and there was no other turning point in the nocturnal heaven.¹⁹⁴ In any case, there was nothing prohibiting motion of the firmament, so long as it fulfilled the scriptural task of separating the celestial and terrestrial waters (Gen 1.6-8).¹⁹⁵ Having stated this condition, Augustine declined to become further involved in the topic as instruction in spiritual matters was more important.

Again regarding the night sky, the constellations consisting of the fixed stars, seemed to contain the highest stars above the earth because their motions were regular and so much more predictable than those of other stars. These latter were accordingly called wandering stars (*sidera vaga*) or planets.¹⁹⁶ Another reason for the supposed superior altitude of the constellations was that they did not move with respect to one an-

190. "Si autem stat, quomodo sidera quae in illo fixa creduntur, ab oriente usque ad occidentem circumeunt." (*Ibid.*).

191. "Septentrionibus breviores gyros juxta cardinem peragentibus." (*Ibid.*) Cf. *Conf.* 5.4.7. The Latin name was the Septentriones because this group was thought to consist of seven northern stars. See also Dicks 30-31 & 49.

192. *DGnL* 2.10.23. Cf. *Conf.* 5.4.7.

193. "Ut coelum, si est alius nobis occultus cardo ex alio vertice, sicut sphaera." (*DGnL* 2.10.23).

194. "Si autem nullus alius cardo est, velut discus rotari videatur?" (*DGnL* 2.10.23).

195. "Firmamentum enim non propter stationem, sed propter firmitatem, aut propter intransgressibilem terminum superiorum et inferiorum aquarum, vocatum intellegere licet." (*DGnL* 2.10.23). So Augustine allowed that the name "firmament" did not exclude its moving. (*Ibid.*). For the early church fathers on the rotation of the heavens, see *PL* 6.426.

196. Apparently, the predictability of the motions of the constellations implied that they were in a higher and more tranquil layer of the ether than the planets, just as the more tranquil region of air where birds could not fly was above the air which was buffeted by storms. (See notes 196 & 203ff. and accompanying text.)

other, whence the name of fixed stars (*sidera fixa*) but behaved as if they were all imbedded in the firmament. The rotation of this last-mentioned carried across the night sky all the constellations, like Aries, Taurus, Cancer and Scorpio.¹⁹⁷

Other than naming various constellations, Augustine has little more to say about them, which is surprising for a former zealous student of the books of the astrologers.¹⁹⁸ On the other hand, especially from the reign of Valentinian I (364-375) onwards, astrology was one of the magical arts under imperial proscription, even sometimes to the extent of capital punishment.¹⁹⁹ Augustine may have considered it dangerous to display an excessive knowledge of that dark art. However, there is also the fact that despite imperial proscription, Augustine's milieu was permeated through and through with a fervent faith in the stars as omens of future events.²⁰⁰ So the more Augustine had to say about astrology, the more he would have aggravated a chronic social addiction. On the other hand, as one author has observed, on rare occasions Augustine has betrayed a technical knowledge of astrology by his vocabulary.²⁰¹ While not discounting some influence of the stars on terrestrial life, Augustine was strongly opposed to astrological determinism which robbed humans of free will.²⁰²

Contrasting with the predictably moving fixed stars of the constellations were the wandering stars (*sidera vaga*) or planets, of which each moved unpredictably and independently of the others, as if not imbedded

197. *Ciu. Dei* 7.15 (415-417).

198. Conf. 4.3.5. For a possible exposition of this aspect of Augustine's past life, see Leo C. Ferrari, "The Peculiar Appendage of Augustine's *Enarratio in Psalmum LXI*," *Augustiniana* 10 (1979): 3-17. For a more recent and lengthier treatment of Augustine and astrology, see Bernard Bruning O.S.A., "De l'astrologie à la grce," *Augustiniana* 41 (1991) (vol. II of *Mélanges T. J. Van Bavel*): 575-643. See also *BA* 48.609-612.

199. A.A. Barb, "The Survival of the Magical Arts," chapter 5 in *The Conflict between Paganism and Christianity in the Fourth Century* (ed. Momigliano), Oxford: Clarendon Press, 1963.

200. F. van der Meer, *Augustine the Bishop, Religion and Society in the Middle Ages*, New York: Harper Torchbooks, 1961, 60-67.

201. S.J. Tester, *A History of Western Astrology*, New Hampshire: Boydell Press, 1987, 110-111.

202. See Conf. 4.3.4 & *BA* 48.609-612.

in the firmament²⁰³ like the fixed stars.²⁰⁴ Furthermore, sometimes they even performed retrogradations, by slowing down, stopping, or even retreating backwards against the uniformly moving background of the fixed stars, before resuming their nocturnal journeys.²⁰⁵ But Augustine avoided further discussion on the topic by saying that the best way for dealing with such problems (including also the magnitudes and distances of the stars), was to turn the mind to matters which were weightier and more sublime.²⁰⁶

The highest of the seven planets, or wandering stars, was thought to be Saturn,²⁰⁷ considered to be the coldest star²⁰⁸ and which had an evil reputation among astrologers.²⁰⁹ Its lengthy period of revolution of thirty years²¹⁰ indicated great height and great speed so that it should have been very hot. In fact, as mentioned above, the opposite condition was imputed to it. The cooling was considered by some thinkers to be due to its proximity to the frigid waters (Gen 1.6-7), already mentioned as being located above the firmament.²¹¹ Saturn was also seen by some thinkers as an illustration of the theory that the higher a star, the longer its orbiting time, since it had a much greater distance to travel around its orbit.²¹² Above the planets were the constellations of fixed stars which followed a more constant and undeviating course as already mentioned.

203. These included also the sun and moon (DGnL(imp) 12.37). Regarding early thought on the planets, see Dicks 33, 46-47 & 58.

204. *DeGal(imp)* 12.37. Cf. *ciu. Dei* 7.15 (415-417). The discovery of the distinction is imputed to Anaximenes. See Heath 43.

205. *DGnL* 2.16.33. Cf. *Tim.* 40c. See also *BA* 48.608 and Dicks 113.

206. "Nobis autem de intervallis et magnitudine siderum subtilius aliquid quaerere, talique inquisitioni rebus gravioribus et melioribus necessarium tempus impendere, nec expedit, nec congruit." (*DGnL* 2.16.34).

207. "Et documentum adhibere conati sunt de tarditate stellae unius de septem vagantibus quae superior est caeteris, et a Graecis *Phain**n** [Saturnus] dicitur." (*DGnL(imp)* 8.29).

208. *DGnL* 2.5.9. On this point, see TeSelle, *op. cit.* 206.

209. *De consensu evangelistarum* 1.23.36 (400-415). Cf. *Conf.* 4.3.4.

210. *DGnL(imp)* 8.29 & *DGnL* 2.5.9. The figure of 30 years is remarkably close to the modern one of 29.46 years.

211. See note 213 above. Granted this proximity, one can well wonder if the constellations could fit in between Saturn and the super-celestial waters. See also *BA* 48.597 and TeSelle, *loc. cit.*

Augustine was careful to point out that mere scientific knowledge of the stars of the second, or ethereal heaven did not of itself constitute supernatural wisdom. He considered that astronomers, lacking the christian faith, "were using only carnal eyes" for the contemplation of heavenly bodies.²¹³ For him, the astronomers (*philosophi*) who could predict eclipses and count all the stars, as well as predict the courses of the planets, were only the more lost in their learning if they had not also gone beyond the visible heavens and, through Christ the Way, found God.²¹⁴

12. The Heaven of Heaven

Since the third heaven, or the Heaven of heaven, was accessible only to the mind entirely separated from, and purified of, the senses,²¹⁵ consideration of it does not properly belong to Augustine's cosmography. Yet this Heaven was of supreme importance to the Elect of the earth, as the highest goal towards which their lowly earthly pilgrimage was directed.²¹⁶ Therefore, this goal and how motion towards it is described needs some discussion.

Beyond the visible heavens of air, then the ether, lay the third heaven, or the Heaven of heaven (*Caelum caeli*) which was so named because compared with it the visible heavens were much closer to the things of earth.²¹⁷ According to the psalmist, the Heaven of heaven was God's

212. "Iidem namque asserunt stellam quam Saturni appellant, esse frigidissimam, eamque per annos triginta signiferum peragere circulum, eo quod superiore, ac per hoc ampliore ambitu graditur." (*DGnL* 2.5.9).

213. *DGnL(imp.)* 12.37: "An ita nunc fit ista divisio [diei et noctis] per luminaria, ut hominibus nota sit etiam solis carnalibus oculis ad rerum istarum contemplationem utentibus."

214. *Conf.* 5.3.3, 5 & 5.4.7. Cf. *DGnL* 1.20.40.

215. "[Coelum] tertium vero, quod mente conspicitur ita secreta et remota et omnino abrepta a sensibus carnis" (*DGnL* 12.34.67). Paul was caught up into the third heaven during his ecstasy (2 Cor 12.1-4). See *DGnL* 12.34.65 & 67. In these texts, Augustine also allows that Paul may have been raised into the third heaven and from there transported into Paradise.

216. This vertically superior heavenly destiny is succinctly expressed in Ps 18.2: "You are gods, sons of the Most High." This passage is featured three times in Augustine's early works: *De sermone Domini in monte* 2.4.15 (394), *Contra Adimantum Manichaeum* 5.2 (394) and *Adnotationes in Job* 38 (399). Then again, the notion of God as the Most High is very common in Augustine's works.

(whence his name of "Most High"), while he has given earth to the sons of men (Ps 113.16).²¹⁸ Since the contents of this Heaven of heaven were entirely removed from human senses, it was not another physical component, or even the most important component, of the physical universe. Augustine also states that it would be rash to conclude that the third heaven was Paradise which can be said of any spiritual place where the soul is in a happy state.²¹⁹ But there was a place totally removed from the senses which was the dwelling place of God and the blessed, and was the Paradise of paradises.²²⁰

As already noted, in terms of its spiritual significance therefore, Augustine's cosmography presents a vertical universe polarized between the infernal regions in the bowels of the gross earth and the immaterial third heaven beyond the ethereal heaven of the stars and beyond the highest of heights. In this vertical universe, upwardness had an essential quality²²¹ of increasing immateriality in passing up from the first heaven of air, through the second one of ether, to the third heaven.²²² Moreover, just as with the mediating roles of air and fire between the body and soul, as seen above, so too, pure tranquil air and ether mediated between the gross earthly region²²³ and the immaterial Heaven of heaven.²²⁴

217. Whence Augustine's twofold meanings for heaven and earth, as set out by Taylor: 1, 235, n. 41. See also *ibid.* 1, 227, n. 33.

218. *Conf.* 12.8.8, 12.11.12 & 12.15.20.

219. "Omnis etiam spiritualis quasi regio, ubi animae bene est merito paradus dici potest" (*DGnL* 12.34.65).

220. Writing of the third heaven Augustine says: "Non incongruenter arbitramur, et illuc esse Apostolum raptum [2 Cor 12.2-4] et ibi fortassis esse paradus omnibus meliorem, et si dici oportet, paradus paradusorum." (*DGnL* 12.34.67).

221. *Cf. Republic* 9.584d-e.

222. "Si ergo coelum primum recte accipimus hoc omne corporeum generali nomine quidquid est super aquas et terram; secundum autem, in similitudine corporali quod spiritu cernitur, sicut illud unde animalibus plenus in exstasi Petro discus ille submissus est [Act 10.10-12]; tertium vero, quod mente conspicitur ita secreta et remota et omnino abrepta a sensibus carnis." (*DGnL* 12.34.67).

223. As seen above, this consisted of the earth, its waters and the turbulent region of moist (and so, watery) air immediately above them.

224. Regarding the degrees of decreasing materiality of the elements mediating between the material body and the immaterial soul see *DGnL* 7.15.21.

Accordingly, and in the previous perspective, Augustine's rise towards God, as exemplified in the well known vision of Ostia and its precursors in the *Confessions*²²⁵ all contain allusions to an "ascent". A knowledge of Augustine's cosmography now sets these descriptions in their context, when the implicit *terminus a quo* is the vile earth at the bottom of the universe, harboring the infernal regions below and the temporary *ciuis Terrena* on its surface. The *terminus ad quem* is the Heaven of heaven beyond the stars.

In the case of the vision of Ostia, this can now be seen as passing from its earthly site, through the various lower heavens, first the lowest heaven of air (*perambulavimus gradatim cuncta corporalia*), then through the firmament of stars (*et ipsum caelum, unde sol et luna et stellae lucent super terram*) next beyond their own minds²²⁶, then finally up to the place where God feeds Israel forever upon the food of truth in the most divine part of the soul.²²⁷ All this, as Augustine suggests, is a rising upwards in anticipation of the final fulfillment, namely to "enter into the joy of the Lord."²²⁸

As an aid to this venture, Augustine sees the stars of the firmament as possessing an essential mediating role like the Scriptures, when he says in the last book of the *Confessions*:

Who except you, our God, has made for us a firmament of authority over us in the form of your divine Scriptures? For "the heavens shall be rolled up like a scroll" (Is 34.4)²²⁹ and now they are stretched over

225. *Conf.* 9.10.23-26. See also *ibid.* 7.10.16 & 7.17.23, as well as the context of note 158 above.

226. *Conf.* 9.10.24. See pp. 129-130 in Pierre Courcelle, *Recherches sur les Confessions de saint Augustin* Paris: Editions E. de Boccard, 1968.

227. See Solignac on the goal of this ascent (*BA* 14.552-555); also O'Donnell 3.131-133.

228. "Quale fuit hoc momentum intellegentiae, cui suspiravimus; nonne hoc est, 'intra in gaudium domini tui'? Et istud quando? An eum omnes resurgemus, sed non omnes immutabimur [1 Cor 15.51]?" (*Conf.* 9.10.25). In general, as already mentioned, references to heaven under various aspects abound in the *Confessions*, and particularly in the concluding two books which see the climax of the spiritual pilgrimage of the work. Thus, of 250 references (to *coelestis/coelum*) in the work, 153 (or just over 60%) are found in the last two books (12-13) which constitute about a mere 20% of the total work. See also O'Connell's *Soundings* 84ff.

us like a skin. For your divine Scripture is of a more sublime authority, now that those mortal men, through whom you dispensed it to us, have suffered this present death.²³⁰

For Augustine, just as the firmament divided the earthly waters below it from the celestial waters above, so too it divided the earthly people below (who must look up to the divine Scriptures as they look up to the firmament), from those “supercelestial peoples, who are your angels...who have no need to look up at this firmament, or by reading to know your Word.”²³¹ Again, the picture contains Augustine’s implication that height is related to spiritual superiority.

According to Augustine therefore, mankind, living as it does on the face of the earth, has a very inspiring reason for nocturnal contemplation of the stars. Each person is looking up, if not at the Heaven of heaven itself (which cannot be seen by the eyes of the flesh),²³² then at least *in the very direction* of that third heaven. Therefore, it is important to realize that while Augustine denied materiality to the Heaven of heaven, nevertheless for him it definitely possessed an important orientation with respect to the earthly site of humankind.

Perhaps then, Augustine’s vertical, up-down universe, may have been the ultimate reason why he resisted so vigorously the astronomers with their notion of a global earth. “Up” would lose its absolute character and together its direction towards as the dwelling place of the Most High.²³³ Also, this same universe restricted morally significant motions of the

229. Cf. Apoc 6.14. I have had to amend the Ryan translation of *caelum plicabitur ut liber* which (following many others) renders it by the phrase: “the heavens shall be folded together like a book.” I do not know just how one would perform this operation. However, the enigmatical phrase would have been mandatory had Augustine used *codex*, meaning a book in the modern form known to us. In any case, the extract is from Isaiah, and so obviously involves a scroll since the book (*codex*) only came into general use in the fourth century AD. See Moses Hadas, *Ancilla to Classical Reading*, (New York) 1954, 11.

230. (*Conf.* 13.15.16.) As Augustine himself points out in the same context, this passage is an explication of *DGnL* 2.9.22. Cf. *Ep. ad Oros. c. Prisc. et Orig.* 11.14; *En. in ps.* 8 7; *En. in ps.* 93 6; *En. in ps.* 103 1.7 & 8 and *En. in ps.* 146 15.

231. *Conf.* 13.15.18.

232. *Conf.* 12.2.2 & *DGnL* 12.34.67.

233. In the psalms alone, so beloved of Augustine, God is addressed some seventeen times as the

separated soul, either up to the Heaven of heaven, or down to the infernal regions in the bowels of the earth. Lateral movements were morally insignificant. This helps explain Augustine's complete and ultimate polarization of all of humanity into the two cities, one of the Elect, the other of the damned, respectively.²³⁴

In final analysis therefore, for Augustine the terrestrial realm was a world from which to escape, at least for the Elect. The damned would presumably be located forever in the infernal regions beneath the earth. Preoccupation with the eternal separation of these two societies seems to even carry over into Augustine's vision of the saints' status in the new heaven and the new earth (Is 66.22 & Apoc 21.1) consequent upon the final conflagration. Despite the new earth and their spiritual bodies²³⁵ the saints would not enter into an earthly Paradise. In the concluding book of the *De ciuitate Dei*, Augustine is at pains on three occasions²³⁶ to prove that redeemed earthly bodies can exist "even in the highest heaven - *etiam in summo coelo*"²³⁷ which would then be the site of the Kingdom.²³⁸

Principal Conclusions

This exploratory study of Augustine's cosmography shows that he considered the essentially flat and circular earth and its covering of the visible heavens as the two greatest bodies in the universe. Failure to appreciate this has caused several significant misunderstandings of Augustine's worldview. Also, it has been shown that he saw the immense and essentially flat earth as surrounded by the mighty Oceanus. In

"Most High."

234. *Ciu. Dei* 14.28.

235. *Ciu. Dei* 22.21.

236. *Ciu. Dei* 22.4 & 11. See also 13.18.

237. *Op. cit.* 22.11.

238. See P. Fredriksen, "Vile Bodies: Paul and Augustine on the Resurrection of the Flesh," pp. 75-87 in *Biblical Hermeneutics in Historical Perspective*, (Studies in Honor of Karlfried Froehlich on his sixtieth Birthday), Grand Rapids (Mich.): 1991. See p. 86. For a more general perspective see C.E. Hill, *Regnum Caelorum*, Oxford 1994.

this universe, though he believed that the sun, moon and stars were possessed of natures immensely superior to those of earthly bodies, nevertheless, it follows from the previous conclusions that they were much smaller in size than the earth.

Another surprising discovery was that of the voyage of the sun in circular or elliptical horizontal paths above the immense, flat earth. This picture of the earth at the bottom of the universe, if not derived from Scripture, seems to have been derived *in accord with Scripture*. Indeed, with certain inclusions and exclusions,²³⁹ Augustine's cosmography is carefully confined to the exigencies of scriptural exegesis. This is quite logical, since Augustine saw God as the author of both the Scriptures and of the cosmos. Perhaps for that reason too, he had so little patience for the astronomers of his time for their ideas which trespassed on the sublimest of regions of the visible universe which should therefore be rather the object of spiritual meditation.

239. The theory of the four elements and their motions, adopted from the ancient Greek philosophers, were well adaptable to Augustine's vertical universe with its two possible ultimate locations of the separated soul. By way of contrast, the notion of antipodean people was vigorously excluded, seemingly as being incompatible with Augustine's vertical moral universe.