



LUND UNIVERSITY

John Philoponus against Cosmas Indicopleustes : A Christian Controversy on the Structure of the World in Sixth-Century Alexandria

Elweskiöld, Birgitta

2005

[Link to publication](#)

Citation for published version (APA):

Elweskiöld, B. (2005). *John Philoponus against Cosmas Indicopleustes : A Christian Controversy on the Structure of the World in Sixth-Century Alexandria*. [Doctoral Thesis (monograph), Greek (Ancient and Byzantine)]. Greek.

Total number of authors:

1

General rights

Unless other specific re-use rights are stated the following general rights apply:

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Read more about Creative commons licenses: <https://creativecommons.org/licenses/>

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

LUND UNIVERSITY

PO Box 117
221 00 Lund
+46 46-222 00 00

John Philoponus against Cosmas Indicopleustes

**A Christian Controversy on the Structure
of the World in Sixth-Century Alexandria**

By Birgitta Elweskiöld

Lund 2005

*Lund University
Department of Classics and Semitics*

© Birgitta Elweskiöld 2005

ISBN 91-628-6642-7

Printed in Sweden

Media-Tryck, Lunds universitet

2005

To Paul

Organization LUND UNIVERSITY Department of Classics and Semitics Sölvegatan 6, SE-223 62 Lund Sweden	Document name DOCTORAL DISSERTATION	
	Date of issue October 21, 2005	
Author(s) Birgitta Elweskiöld	Sponsoring organization	
Title and subtitle John Philoponus against Cosmas Indicopleustes. A Christian Controversy on the Structure of the World in Sixth Century Alexandria		
Abstract The scope of this study is to compare John Philoponus and Cosmas Indicopleustes, two Christian individuals of different backgrounds and belonging to different fractions of the Church in the turbulent time for the Church in sixth century Alexandria. Any Christian is likely to feel the need to define how the tenets of his or her faith relate to contemporary science. As long as Christianity has existed, it has been active in societies where science has had a prominent position. There are obviously two extreme positions: either you declare that science is always right when it is in conflict with the Bible, or you regard the Bible as given by God and science as an inferior, man-made source of truth. Intermediate positions are those chosen by the two sixth-century writers who are the focus of this study, John Philoponus and Cosmas Indicopleustes. We have no clear evidence to show that Cosmas and Philoponus, as individuals, polemized against each other, or even that they knew each other. However, not as individuals, but as representatives of the two opposing fractions, they certainly stand against each other. They were both Christians, and the books by them that we study here are attempts to reconcile their ideas on geography and cosmology with what Scripture teaches about these matters. Although both of them refer to Bible passages as support, they draw widely different conclusions. Although Cosmas distances himself from science and although Philoponus refuses to accept all doctrines taught by the philosophy that he knew so well, it is primarily a controversy between two Christian fractions.		
Key words Alexandria, De Opificio Mundi, Christian Topography, two-floor building, firmament, Genesis, angels, heaven, philosophical terms, philosophical reasoning, theology		
Classification system and/or index terms (if any)		
Supplementary bibliographical information		Language English
ISSN and key title		ISBN 91-628-6642-7
Recipient's notes	Number of pages xiv +142	Price
	Security classification	

Distribution by (name and address)

I, the undersigned, being the copyright owner of the abstract of the above-mentioned dissertation, hereby grant to all reference sources permission to publish and disseminate the abstract of the above-mentioned dissertation.

Signature _____

Date _____

1 Introduction

1.1 The controversy

Any Christian is likely to feel the need to define how the tenets of his or her faith relate to contemporary science. As long as Christianity has existed, it has been active in societies where science has had a prominent position, and to everyone it has been obvious that the answers provided by science to a number of pertinent questions are in conflict with the answers provided by Scripture to the same questions. Hence the necessity for Christians to take a position in this conflict between faith and science.

There are obviously two extreme positions: either you declare that science is always right when it is in conflict with the Bible, or you regard the Bible as given by God and science as an inferior, man-made source of truth. Both positions are difficult to uphold. A Christian must accept some of the doctrines preached by the Bible, even those that in the light of science will appear to be irrational, so science cannot be allowed to dictate everything. On the other hand, the Bible is in conflict, not only with the more or less esoteric doctrines of science, but sometimes also with the sound empirical knowledge of ordinary man, so the Bible cannot be supposed to give the correct answer to every question. From this it follows that, in practice, Christians in these matters normally take some sort of intermediate positions between the two extremes.

Intermediate positions are indeed those chosen by the two sixth-century writers who are the focus of this study, John Philoponus and Cosmas Indicopleustes. They were both Christians, and the books by them that we study here are attempts to reconcile their ideas on geography and cosmology with what Scripture teaches about these matters. However, their backgrounds were much different. One of them, Philoponus, represents the very first order of contemporary philosophy (and philosophy in those days, we must be aware, raised claims to providing the ultimate truths, much as science does today). He had a profound knowledge of contemporary natural science, and it is the tenets of that science he tries to trace in the writings of Moses and the rest of the Bible. Cos-

mas, on his side, was a man of wide practical experience and, although not entirely unfamiliar with the scientific doctrines of his day, he explicitly rejects the scientific teachings of “those outside” the Christian community (or the variety of Christian community he belonged to himself). His image of the world’s physical shape differed considerably from that taught by contemporary science.

Thus, there ensues a controversy between the position of Cosmas and that of Philoponus. Although Cosmas distances himself from science and although Philoponus refuses to accept all doctrines taught by the philosophy that he knew so well, it is primarily a controversy between two Christian fractions. We have no clear evidence to show that Cosmas and Philoponus, as individuals, polemized against each other, not even that they knew each other,¹ although they were contemporaries and both lived in Alexandria. However, not as individuals, but as representatives of the two opposing fractions, they certainly stand against each other. This is the reason why I chose the phrase “Philoponus *against* Cosmas” for the title of this book and, since they are better known to us than other contestants in this controversy, I have allowed myself sometimes to refer to them as “opponents” or “combatants”, as if they had actually met in face-to-face disputes.

What I concentrate upon is the way in which they fought that imaginary combat. They had both the same intention with their writings: to reconcile the teachings of the Bible with what they actually knew themselves about the physical world they lived in. The empirical data provided by that world were common to them, Cosmas could hardly have been ignorant of the philosophical interpretations of those data prevalent in contemporary Alexandria and defended by Philoponus, and the Bible was a common source of knowledge, highly revered by both. Both had a profound knowledge of their Bible and, when defending their positions, they largely use the same Bible passages, only interpreting them differently.

Thus, this will be a study of how two Christians of the sixth century argued, from two different stand-points, *for* the truth of Scripture and *against* each other. It will define the sources of their arguments, whether they come from Scripture itself, from particular interpretations of it, from the empirical world or from scientific or pseudo-scientific doctrines. It will also, when possible, analyze the reasons for choosing one argument before another or for arguing a particular point with unusual vigour.

Admittedly, the scope of the study is limited. The questions concerning the structure of the world were not the only ones that divided sixth-century Chris-

¹ There is one passage in Cosmas (*Topogr.* VII.1) that refers to a certain individual of the opposing party, and that individual may well have been Philoponus.

tendom into fractions. The dogmatic controversies of the time form the background against which the Cosmas–Philoponus controversy was fought; this particular issue was part of a greater whole and, when discussing the relations of Philoponus and Cosmas to each other and to their surrounding universe, it is necessary to take a greater part of the theological spectrum into consideration. This is particularly fruitful when we discuss their choice of arguments and their insistence of particular points.

1.2 Background

During the sixth century a great and bitter controversy was prevalent in the Church. It is known as the Three-Chapter controversy and concerns works of three men who were to be anathematized at the Council of Constantinople in 553. These works were the writings of Theodore of Mopsuestia, certain writings of Theodoret of Cyrrhus and the letter of Ibas of Idessa to Maris in Persia.

The Council of Chalcedon in 451 had professed itself to the following faith: “One and the same Christ, Son, Lord, only-begotten, who was known in two natures (φύσεις) unmingled, unchanged, undistinguished, unseparated, at which the difference between the both natures in no way is abolished by the union, but sooner are the characteristics of the way of life of both of them remaining preserved, and both come together in one person (πρόσωπον) and one hypostasis (ὑπόστασις), not divided or separated in two persons (πρόσωπα), but one and the same, only-begotten (μονο-γενής) Son, God, the Word, the Lord Jesus Christ.”² Bound to this profession was a hope that different fractions within the whole Church of this time could be united in the view on Jesus Christ. Henry Chadwick points out that the Christological definition produced by the council of Chalcedon in 451 was a brilliantly constructed piece, in which the central contentions of the school of Antioch were protected but set within a qualifying framework of Alexandrian language.³ One could say that the clauses protecting the ‘two natures’ tradition of Antioch were derived from a mosaic of phrases taken from diverse writings of bishop Cyril himself and that these clauses resulted in the sentence “the difference of natures is not destroyed by the union”. But, unfortunately, Cyril had insisted that the one Christ is the product *of* two natures. The other party wanted Christ to be *in* two natures.

² ACO II/1/12, 129, 30-34.

³ Sorabji (1987) 44.

Obviously it was the Christology that caused the controversy in the Church in the time of Philoponus and Cosmas, and the profession of Chalcedon was not valid for the whole of the Church. That fraction, to which the school of Antioch belonged, reckoned among its adherents famous teachers such as Theodore of Mopsuestia and Nestorius. They did not look upon Christ as one and the same, only-begotten Son, but sooner reckoned two persons, a divine and a human, existing in juxtaposition in the incarnate Christ. As a consequence Nestorius denied the epithet *theotokos* for Mary and preferred *anthropotokos* or *Christotokos*. To deny Mary the function of being *theotokos* was abhorrent to the Alexandrians. We must reckon that Cosmas, who adhered to the Antiochenes, also was a Nestorian.⁴ MacCoull takes a different stand. He claims that John Philoponus was a committed Egyptian Monophysite and that his intention was to provide the nascent Coptic church with a powerful set of tools for argument, with which Egyptian Monophysites could defeat their Chalcedonian opponents.⁵

As the views on Christ were inexorably far apart from each other in Alexandria and Antioch, it was also, inexorably, a fact that bitter feuds, anathemata, and even mutual persecutions followed. The efforts to achieve peace and union had not been successful and in the days of Philoponus and Cosmas the feuds still were bitter.

1.3 Biographical data

1.3.1 Philoponus

John Philoponus was schooled in Neo-Platonism and he was a commentator of Aristotelian science of his day. His life lasted from around 490 to 570. Some scholars believe that he was converted to Christianity, and in an article of 1916 Gudemann/Kroll wrote that Philoponus had been converted from paganism to Christianity and that from this time all his non-theological writings were insignificant for the history of theology.⁶ Other scholars, like Richard Sorabji and Étienne Evrard, believe that Philoponus was a Christian from the beginning and they mean that his name, John, suggests this to be the case.⁷ His other name, Philoponus, is a nickname. According to Sorabji it had been given to various

⁴ Madathil (1996) 7. Madathil is sceptical to Cosmas' Nestorianism.

⁵ MacCoull (1993) 47.

⁶ Scholten (1996) 5. Scholten here refers to a *PW* article by Gudemann/Kroll from 1916.

⁷ Sorabji (1987) 5.

philosophers because of its literal meaning: ‘lover of work’. Such workers used to live together in a kind of guild called a ‘Philoponeion’. Philoponus was also known as the ‘Grammarian’ (γραμματικός) and this was an epithet that he used about himself.⁸

Philoponus was fellow-student with Elias and the Athenian Simplicius at the feet of Ammonius. They shared in common an unusual interpretation of Aristotle which made him seem close to Christianity. Scholten points out that Philoponus is not known in theological circles, but in the history of philosophy he is reckoned as one of the most important figures in late Antiquity.⁹ He wrote commentaries on several works by Aristotle (*Categories*, *Analytica priora* and *posteriora*, *Physics*, *De anima*, *De generatione et corruptione* and *Meteorologica*). In a series of writings Philoponus’ pointed out that matter itself had a beginning. The most important of those documents was perhaps *De Aeternitate Mundi contra Proclum* of 529, which was directed against the Athenian Neo-Platonist Proclus the very same year that the school at Athens was closed down.¹⁰ Among his many achievements of lasting importance it could be worth mentioning that he has developed the ‘impetus theory’, which says that all movements which take place in nature go back on one uniform principle. Philoponus also classifies space as an extension between limitation lines. Further, he says that the natural place for the elements fire, air, water and earth and which they also take, is the order that God has decided for them. Philoponus invents a new conception for matter, when he understands Aristotle’s ‘prime matter’ as three-dimensional extension. Philoponus rejects Aristotle’s fifth element, the ether. In this connection it is also worth mentioning that Philoponus is recognized as precursor of Galileo Galilei.¹¹ According to Richard Sorabji, Philoponus’ writings, both his commentaries on Aristotle and his Christian works, span at least sixty years, from before 517 to as late as 574.¹²

According to MacCoull, whose hypotheses here I find too deviating from *communis opinio*, Philoponus lived and worked in Byzantine Egypt. In this world the rich, classically educated city elite were highly visible in the villages and increased their wealth and that of the country as a whole by tenancy and credit enterprises. This wealth supported a church that had replaced the decayed pagan temples as the provider of the year’s rhythm and of a very visible manifestation of divine power. When this church began, with strongly felt doctrinal

⁸ Simplicius, *in Cael.* 119.7.

⁹ Scholten (1996) 4.

¹⁰ Sorabji (1987) 7.

¹¹ Scholten (1996) 7–8.

¹² Sorabji (1987) 40.

motivation, to determine its own affairs, it was both taking on an enormous social responsibility and effecting a major shift in the structure and functioning of this economically important province. MacCoull also points out that Philoponus never officially taught classical philosophy at Alexandria, having begun as a Copto-Greek philologist, but put all his learning at the disposal of what scholars like to term the ‘Monophysite movement’.¹³ However, in spite of the doubts expressed by MacCoull, I think it safe to presuppose, for this study, that Philoponus was a respected scholar well-known in Alexandria and much respected in the church.

1.3.2 Cosmas

The author of the *Christian Topography*, whom we are used to call Cosmas Indicopleustes, is in reality anonymous to us. He simply refers to himself as ‘a Christian’. It is not inconceivable that the name Cosmas was assigned to him because of his preoccupation with the universe (κόσμος). The epithet Indicopleustes was added as he was thought to have travelled as far as India. These names emerged in manuscripts in the eleventh century, and we still use them today out of convenience and supported by tradition.

Cosmas was a merchant from Alexandria and probably imported spices from the Orient. He had travelled a lot in his trade. He was acquainted with Palestine and the surroundings of Mount Sinai and had visited the Island of Dioscorides (today’s Socotra). He had sailed what he calls “the three gulfs”, viz., the Mediterranean Sea, the Red Sea and the Persian Gulf. He even claims to have ventured beyond the Persian Gulf to the borders of what he calls Βαρβαρία ‘Barbary’, crossing Ζίγγιον, i.e., the ocean outside the gulf. However, that does not mean, according to Wolska-Conus, that he has been to India. In her analysis of book XI, which contains Cosmas’ description of the Oriental regions, Wolska found that Cosmas’ eyewitness descriptions limit themselves to countries that are bounded by the Nile and the Red Sea. When he reports about India, he tells what he has heard, and he always begins these reports with φασί, ‘they say’.

When Cosmas wrote his *Christian Topography* he was no longer a young man. He complains of bad health. His eyes are not well and his stomach causes him trouble. It is not unlikely that he had become a monk by the time he wrote his work.

In II.1 Cosmas says about himself that he lacks complete education, he is unskilled in the art of rhetoric and he cannot compose a speech in a language with

¹³ MacCoull (1993) 58, 59.

a large vocabulary. But, as Madathil points out in his thesis, Cosmas acquired good knowledge of literature and of the science of his time as he was intelligent and was religiously minded.¹⁴ That Cosmas, who lived and worked in Alexandria, was in sympathy with the Antiochenes must have its explanation in the fact that he came into contact with theologians of that fraction and with the Church of Persia on his many journeys eastwards. *Christian Topography* was not the only work by Cosmas' hand, although it was his greatest and probably most important work. The other works which he mentions (none of them has survived, unless parts of them have been incorporated in manuscripts of the *Topography* and now are treated as more or less alien portions of that work) treated geography and astronomy or were commentaries on books of the Bible.

1.4 The texts

1.4.1 Cosmas

For my studies of the *Christian Topography* by Cosmas Indicopleustes I have used the edition in three volumes by Wanda Wolska-Conus from 1968.

Cosmas' work, in the form we know it today, consists of twelve books. After an introduction which urges the reader to study the work with attentiveness, there follows an index with the contents of each book. Further, an account of the subject which presents the general scheme of the work and from which different themes distinguish themselves, namely, the cosmographic theme and the prophetic theme, the anthropological theme and the Christological theme. The cosmographic theme deals with the idea that the tabernacle, which Moses was ordered by God to build in the desert, is a copy (ἐκμαγείον) of the two-floored universe. The prophetic theme develops the idea that the two floors reflect the two conditions (καταστάσεις) for us humans, the present condition which is here on earth, and the future condition which is the Kingdom of Heaven into which Christ has opened a 'new and living way for us'.¹⁵

The two conditions were created to be stages for the human progress, i.e., a period of apprenticeship in the present condition followed by perfection in the future condition (anthropological theme). In order to support man in his trials in this condition, from the creation of the first man, God has allowed man to catch glimpses of the future condition through prophecies and figures in the Old Testament (prophetic theme). The transition from the first condition to the second is

¹⁴ Madathil (1992) 61.

¹⁵ *Topogr.* II.91 ὁδὸν πρόσφατον καὶ ζῶσαν.

made possible only by a divine intervention. It is Christ, God and man, who got the mission to prepare this transition. His humanity, which became immortal and unchangeable at the resurrection, guarantees that the same will be valid for all humans (Christological theme). As Cosmas' first and foremost aim with his work was to present the construction of the world on the fundament of the Bible, John Madathil makes the interesting remark that the *Topography* could be regarded as a commentary on the *Octateuch*.¹⁶

The twelve books of the *Topography* cover many subjects and themes. Cosmas e.g. starts the first book by writing about the true Christians, pagans and false Christians. Then he passes to talk about the substance and the rotation of the heaven. He jumps from one subject to quite another. Very frequently he starts to write a text (κείμενον) but very soon passes to a digression (παράγραφή) which many times is more extensive than the text itself. Cosmas' extensive travelling and his meetings with many different people doubtlessly contribute to the lively impression his work provides.

Books XI and XII, which are absent in the most ancient of the manuscripts, the *Vaticanus gr.* 699 (ninth century), were added later to the *Christian Topography* and are perhaps fragments from Cosmas' lost book on geography.¹⁷

The date of *Christian Topography* can be derived from information provided by the work itself. In II.56 Cosmas tells us that he has been in 'those places' 25 years before present time, at the beginning of Justin's reign (518–527), when the king of the Axioumites was about to begin a military campaign against the Homerites on the other side of the Arabian Gulf. The cause for the campaign was the murder of a certain Aretas by the Homerites. McCrindle dates the murder of Aretas in 522.¹⁸ With 25 years added, the *Topography* is likely to have been written between 547 and 550. In VI.3 Cosmas tells about two eclipses, of sun and moon, respectively, which both Winstedt and Wolska-Conus identify with the eclipses of the 6th of February and the 17th of August 547. In II.2 Cosmas tells us that he has learnt about piety and about the true knowledge from the same Patricius who from now, by the grace of God, has been exalted to the high bishop throne of all Persia and been ordained catholikos over the Christians there. Patricius, identical with Mar Aba, was catholikos over the Persian church between 540 and 552. In X.67 Cosmas says that he will neglect Theodosius and pass on to his predecessor Timotheus the Young who recently

¹⁶ Madathil (1992) 70.

¹⁷ Wolska-Conus (1968) I.36.

¹⁸ McCrindle (1898) 98. According to McCrindle the campaign took place immediately after the murder. Wolska has a later date for the campaign and dates it between 522 and 525.

had died. Timotheus had died in February 535 and Theodosius took over his office in the same year. In December the following year Theodosius went to Constantinople and spent almost a whole year there. During this time, in 537, Cosmas must have written Book X of the *Topography*. The earliest possible date for the *Topography* is thus 537 and the latest 547.¹⁹

1.4.2 Philoponus

For my studies on Philoponus' work *De Opificio Mundi* I have used Walter Reichardt's Teubner edition (Leipzig 1897). Clemens Scholten published a new edition of *De Opificio Mundi* in 1997, a hundred year after Reichardt's. Scholten's edition contains a mere reproduction of Reichardt's text; there are passages where I have a different opinion about the text from Scholten.²⁰ I have worked with Reichardt's text since it is easily accessible in *TLG* and the printed text is available in most university libraries. I also refer to pages and lines in Reichardt's edition since this is the way of quoting in *TLG*. This should not be a problem to those who only have Scholten's edition at hand, since Reichardt's page numbers are reproduced in the margin of Scholten's edition.

What kind of treatise is the *De Opificio Mundi*? Van Winden talks of it as a "systematic" treatise since both theme, message and build-up of the text are systematically oriented and therefore the treatise should belong to the field of dogmatic theology.²¹ Wildberg mentions the treatise as "Philoponus' last major treatise".²² Sorabji refers to it as "an avowedly theological treatment of creation in the book of Genesis". Wolff looks upon *De Opificio* as a polemical pamphlet.²³ To Robbins *De Opificio* is "really a commentary of Basil's Hexameron"²⁴ and to Chadwick it is "a major essay on the Mosaic cosmogony".²⁵

All of them are wrong, according to Scholten.²⁶ MacCoull, on the other hand, comes closer to the truth when he regards *De Opificio* as "an anti-Nestorian hexaemeral work".²⁷ Mangenot, who argues that the work is "un commen-

¹⁹ Madathil (1992) 64–66.

²⁰ On passages where Reichardt/Scholten offer a questionable text and I have suggested emendations, cf. below, chapter 4, footnote 12, and chapter 5, footnotes 5 and 40.

²¹ Van Winden (1998) 1262.

²² Wildberg (1988) 240.

²³ Wolff (1978) 104.

²⁴ Robbins (1912) 58.

²⁵ Chadwick in Sorabji (1987) 51.

²⁶ Scholten (1996) 47–56.

²⁷ MacCoull (1989) 19.

taire scientifique de l’Hexaéméron”,²⁸ and Schleissheimer, who declared the work to be written “in der Form eines Kommentars zur Schöpfungsbericht des Moses”,²⁹ correctly identified the genre of the work, according to Scholten. The Greek title of the work is τὰ εἰς τὴν Μωυσέως κοσμογονίαν ἐξηγητικά and, according to Scholten, to judge from the title there can be no doubt that *De Opificio Mundi* is a commentary of the Hexaemeron. Scholten also finds it notable that such a title turns up in a Christian exegesis of Hexaemeron in Greek language for the first and only time. He also finds it notable that Philoponus, unlike earlier Christian expounders of the creation story, has chosen to provide a running commentary on the complete text, which is structured much in the same way as traditional grammatical and philosophical commentaries, e.g., his own commentaries on writings of Aristotle.³⁰

De Opificio Mundi is divided in seven books. When it comes to the chapters, Reichardt means that the headings of the chapters do not stem from Philoponus himself, but Scholten is of the firm conviction that they do and the arguments he gives for the headings to be original are, in my view, incontestable.

Scholten³¹ discusses a number of passages in *De Opificio* which he regards as evidence for his opinion that Philoponus’ aim with his commentary on *Genesis* was to defend Moses’ creation story in front of his own colleagues among the philosophers. I would never deny that the passages in question resulted in a blistering criticism against his colleagues, but I am of the opinion that those passages do not point to the philosophers as Philoponus’ primary target. If we are looking for opponents explicitly identified by their names, we detect that Philoponus time after time attacks Theodore of Mopsuestia, the works of whom were to be anathematized in 553. It is true that he never once mentions Cosmas’ name, but it was a usual practice, when writing a critical or polemical commentary, not to mention the names of one’s opponents. Theodore was not alive when *De Opificio* was written, but he was a well-known front figure for the Antiochene fraction of the Church and I reckon Cosmas to be his living mouthpiece in these turbulent times.

An intriguing piece of evidence has been retrieved by Kraemer.³² He writes: “According to one source quoted by as-Sijistani, Philoponus’ refutations of Aristotle and Proclus were undertaken in order to pacify the wrath of his fellow Christians, aroused by his preoccupation with the exegesis of Aristotle’s works,

²⁸ Mangelot (1920) 2337.

²⁹ Schleissheimer (1967) 331.

³⁰ Scholten (1996) 15.

³¹ Scholten (1996) 47–56.

³² Kraemer (1965) 322.

and to protect himself against their threats of divers forms of duress.” A little further on he adds: “According to another source, Philoponus received compensation from his coreligionists for writing these two works in the sum of twenty thousand dinars.” We may speculate that the situation was the same when Philoponus wrote *De Opificio*, so that his book was an attempt to defend himself against his Christian brethren.

To establish the date when *De Opificio* was written is not quite easy. Apart from Philoponus’ silence about church-political matters, there are, according to Scholten, only two factors which can define the date of origin of *De Opificio*, viz., the relation to Cosmas and the identification of Sergius, the addressee of the work. Scholten refers to Reichardt who means that it must be Sergius of Tella, who later became patriarch of Antioch. Athanasius, who is mentioned together with him, is then likely to have been Empress Theodora’s nephew, who was educated by Sergius and the monk Amantius. Scholten then refers to a study by Brooks³³ which gives at hand that Sergius was patriarch between 557 and 560. Brooks’ argument is that, since the addressee is addressed in his capacity of patriarch, *De Opificio* must have been written during the time 557–560. This is, however, far from certain, according to Scholten, as the word Philoponus uses, κεφαλή, does not necessarily refer to a patriarch but can quite as well denote a bishop. Thus, Philoponus could have dedicated his work to Sergius before he became patriarch of Antioch. The dating of the work to 557–560 is probable but an earlier dating is not out of the question. Wolska dates Cosmas’ *Christian Topography* to 547–549, but that provides little guidance for, apart from other uncertainties, we do not know whether *De Opificio Mundi* came into being before or after *Christian Topography*. After a long discussion Scholten comes to the conclusion that *De Opificio Mundi* is likely to have been written between 546 and 560.³⁴

1.5 Scope of the present study

This will be a study which concentrates its interest on the two authors’, John Philoponus’ and Cosmas Indicopleustes’, abilities for argumentation on important questions in the Church of the sixth century. Scholten has applied a broad perspective on Philoponus’ relations to both ancient science and Christian explanation of the world, thereby emphasizing Philoponus’ predecessors. Since

³³ Brooks (1929) 469.

³⁴ Scholten (1996) 56–72.

Scholten treats the same passages as I do, he will, in this connection, sometimes also deal with Cosmas, but I see the passages from another perspective than Scholten. To Scholten the important thing has been to assign Philoponus' and Cosmas' standpoints to one fraction or the other of theologians or believers in the age in which they existed. In my study I have concentrated on Philoponus' relation to *one* contemporary, viz., Cosmas Indicopleustes, as I understand it, an Alexandrian who still seems to be a spokesman for the Antiochene fraction of the Church, while Philoponus, a Christian Alexandrian and scientist, stood for a quite opposite opinion in most of the views in question during this turbulent time. My aim is directed to a more practical level, viz., to compare two Christian individuals, not to define groups or fractions to which they may belong. My study makes no claim to full survey of the two texts but I have chosen certain passages and subjects which seem to be more interesting than others, since they illustrate Cosmas' and Philoponus' standpoints on important matters.

The creation of the world seems to be a subject of great interest since the ways in which Cosmas and Philoponus regard the creation of the world are fundamental for any deeper understanding of their world-view.

Angels have been of interest in people's mind during all times and Cosmas and Philoponus are no exceptions. Their outlooks, though, are very different as would be expected from one merchant and one scientist. They disagree about almost everything concerning the angels.

The same is valid for the construction of the universe. This is another question which separates the two opponents in the highest degree. A rectangular world-building in two floors with a flat earth at the bottom against a spherical universe with the round earth in the middle is a subject apt for a heated discussion.

Heaven will be the last subject for my analysis. When it comes to heaven, we will see that Cosmas and Philoponus agree on some questions but disagree on more. Under the heading of heaven I will deal with both the physical entity and the conception "Kingdom of Heaven".

During the progress of my work I have found good use and support from Scholten's book as can be seen from the references to it, but also otherwise. Still, Scholten's work has been treated from a rather general point of view while my interest is to look at the individuals.

2 Prefaces

In this chapter I will make a short analysis of the prefaces to Cosmas' and Philoponus' works, respectively. The preface of a book is generally an important and revealing part of it and the present works make no exceptions. Hence, an analysis of Cosmas' and Philoponus' prefaces will reveal relevant information about their general out-look and their motivation for writing their respective works.

2.1 Prefaces in general

Scholten points out that scholars like Prächter, Moraux, Hadot and Neuschäfer have studied the structure and contents of prefaces in the period that interests us here.¹ They have found out that the prefaces to works by philosophers and rhetoricians follow a fixed scheme. Such a scheme is most distinct in Ammonius' works and in the works of his followers, Simplicius, Asclepius, Olympiodorus, Elias, David, Eustratius and Philoponus (in his commentaries on Aristotle's *Analytica priora*, *Categories* and *Meteorologica*). In Origen's prefaces to his Commentaries on *Song of Songs* and *Psalms*, this scheme has been traced, too, a fact that supports that the scheme existed at an early date and was widespread and used also by Christians. Athanasius has made use of it, as well as the Antiochene writers Diodorus, Theodore of Mopsuestia and Theodoret.

In the days of Philoponus and Cosmas, the scheme, if complete, would contain eight points:

1. The main purpose of the work (ὁ σκοπός or ἡ πρόθεσις).
2. The benefit of the work for its readers (τὸ χρήσιμον).
3. The authenticity of the authorship (τὸ γνήσιον).

¹ Scholten (1995) 36–37. Scholten's references are to Prächter (1909) 526–533, Moraux (1973) 81–85, Hadot (1987) and Neuschäfer (1987) 57–67.

4. The order of the document in the book or in an author's collected corpus (ἡ τάξις τῆς ἀναγνώσεως).
5. The title of the document (αἰτία τῆς ἐπιγραφῆς).
6. The division of the document (εἰς τὰ κεφάλαια διαίρεσις).
7. The question about to which part of philosophy the document belongs (εἰς ποῖον μέρος φιλοσοφίας ἀνάγεται).
8. The method of the logical proceeding and argumentation (ὁ τρόπος τῆς διδασκαλίας).

The order of these points in a preface is not established and it is not necessary to include them all.

This scheme is useful for analyzing the prefaces of the two works studied here, although more so for Philoponus' preface and less for that of Cosmas. In order to make their dependence on the traditional scheme clear, references to the points of the scheme will appear in the following sections 2.2–3 where the prefaces of *De Opificio* and *Christian Topography* are analyzed; the references appear in the form of digits preceded by # and put into brackets ('(#1)' etc.).

2.2 Cosmas' preface

In his preface to the *Christian Topography*, Cosmas, first of all, asks his readers to apply the greatest attention and care² in order to acquire knowledge about the places (τοὺς τόπους), the forms or figures (τὰ σχήματα) and the information that the work contains (τὰς ἐγκειμένας ἱστορίας).³ He claims to have described in detail almost the whole earth with all its countries, oceans and different peoples, and he states that he has dedicated this book on geography to a certain Constantine, who cannot be identified and whom Wolska, in her index, classifies as a friend of Cosmas'.⁴

Cosmas certainly has made a thorough description of many parts of the known world in his day, with an accuracy that might be expected from a man

² μετὰ πάσης προσοχῆς καὶ ἐπιμελείας.

³ According to Wolska-Conus, (1968) 254 n.1, 'the places' refer to the two cosmic spaces, the present and the future. The 'forms or figures' refer to the drawings in the work which are found in the same chapter as the ἱστορίαι that follow (*ibid.* 255 n. 1.)

⁴ *Topogr.*, prologos 1. Cf. Wolska (1962) 2, 309.

who had travelled much during the exercise of his trade.⁵ As mentioned in our introduction, we know that he had visited Palestine and was familiar with the neighbourhood of Mount Sinai and that he had sailed in the Mediterranean, the Red Sea and the Persian Gulf, but it is worth noting that when he enumerates all places he has visited, he does not include India.

But why has Cosmas taken such trouble to describe the world in the *Christian Topography* and why is he so anxious that those who read his description should do it with care and attention? His answer to this is simple and firm. Those who take the trouble to scrutinize his writings will understand how the world is construed and understand that what he says about the structure of the world is true. As a consequence of a careful study they will also understand that his opponents' world-view is nothing but a great lie. Cosmas' careful readers will be convinced that his opponents spread out fairy-tales to people instead of the truth (#2).

Further, Cosmas makes it clear that he has not devoted himself only to describing what exists down on earth. He emphasizes how important it is for the readers of his work to be willing to carefully study the sketches he has provided of the universe and of the movements of the stars. This astronomical work, written before the *Topography*, was dedicated to a certain *diakonos* named Homologos otherwise unknown.⁶ Cosmas claims to have made the sketches of the universe and of the movements of the stars as an imitation of the experimental globe belonging to and used by 'those outside',⁷ in this case most certainly the adherents of Greek science. He has accounted for all the results in the *Topography* and therefore all Christians, who by the help of God are able to understand Cosmas' work, should also be able to refute the pagan theories and challenge those who tell fairy-tales (#2).

Cosmas may seem self-confident in the preface to his work and he has every reason to be so. Cosmas' world-system is on several points identical with that of Theodore of Mopsuestia, whose doctrines he very probably got to know through Mar Aba, the catholicos of the Nestorian Church of Persia.⁸ Theodore was an esteemed bishop and teacher and by no means a minor figure of his time. To

⁵ According to Wolska-Conus (1968) 36, the two last books of the *Topography*, viz., XI and XII, have been added to the work at a later stage. The books are absent from one of the major manuscripts (*Vaticanus*) and they seem to be fragments of a book on geography lost to us.

⁶ *Topogr.*, prologos 2. Wolska (1962) 2. For unknown reasons Wolska, in her index, classifies also this man as a friend of Cosmas'.

⁷ κατὰ μίμησιν τῆς ὀργανικῆς τῶν ἔξωθεν σφαίρας. These sketches are found in chapters VI.12 and 13 of the *Topography*.

⁸ Wolska (1962) 31.

pass on his thoughts and doctrines would be reckoned as an honourable task. Theodore of Mopsuestia was an ardent adept and a frontal-figure for the Antiochene fraction of the Church. However, Cosmas actually lived and worked in Alexandria and it is a fact that Alexandria and Antioch were highly opposed to each other in church matters and religious affairs. Therefore, it is remarkable that Cosmas decided to take sides with the Antiochenes and adhere to a teacher from Antioch instead of keeping to the school of his hometown.

Cosmas' serious intention with his book as well as his anxiousness, not only that it should be read, but read with reflection and taken seriously, which he appeals for in the preface, is well reflected in the following small example. In II.14, Cosmas asks us to imagine what will happen if we throw a stone into a basin filled with water or air or a still finer matter. In the water it will take considerable time for the stone to reach the bottom but in the air a much shorter time. If we find a finer matter than air it will take the stone a still shorter time to reach the bottom and, if the matter is reduced into nothing, the time will have disappeared as well. As it happens, this little extract in II.14 is almost identical with a passage in book IV of Aristotle's *Physics* (215a20–b10). This fact suggests that Cosmas was acquainted at least with parts of Aristotle's writings, and that on this particular point he also seems to agree with the philosopher. By not simply repudiating Aristotle as being a pagan, Cosmas reveals his ambition to appear as scholarly disposed.

If we return to the scheme of prefaces described above (2.1), we must make the observation that it is a difficult task, perhaps even impossible, to apply that scheme in its entirety to Cosmas' preface. But his primary aim, his σκοπός, is as clear as glass. Cosmas is an ardent defender of the world as a two-floor building and he hopes to convince his readers of 'his truth'. At the same time, he must have considered it to be a χρήσιμον, something very useful to his readers, to contemplate the two conditions, the present condition with all its opportunities for man to get prepared for the future condition, the Kingdom of Heaven. What he has learnt from Mar Aba and probably from other church teachers during the period of travelling as a merchant, he seems to have reproduced truthfully in his work.

From the very beginning, Cosmas lets the readers know something of what will follow in his work, e.g., descriptions of many countries and places and sketches that are intended to support his conception of the physical world. Therefore you do get a lively impression from the preface to the *Christian Topography*. This, in turn, might make you feel it worthwhile to get to grips with the work. When Cosmas asks his presumptive readers to penetrate his work with the greatest attention and care, this sounds rather inspiring. It is true that

the *Topography* is not difficult to read or to understand. On the other hand, it is not easy to obey the exhortation to read it with the greatest attention and care since the digressions are very frequent. Still it is necessary to obey the exhortation; otherwise you will run the risk of losing the thread.⁹

2.3 Philoponus' preface

As regards Philoponus, his outspoken ambition is another one than Cosmas'. Whereas Cosmas seems to take creation for granted and presupposes that his readers will do the same, Philoponus feels the necessity to dwell on the point in order to convince those who doubt or disbelieve that the universe had been created by God. This is strong evidence for Philoponus' ambition to reach out to non-Christians as well as Christians (#1).

He introduces the preface to *De Opificio Mundi* by stating that he has given his argumentations for the creation of the world in several theses. He has felt obliged to do so, since adherents of the honourable philosophy had believed themselves to have proved that the world has not at all been created. A dangerous thing to believe since that would mean that no God at all would be involved in the creation of the world. Philoponus, on his part, claims to have shown that there actually *is* a beginning of the existence of the world, and he claims that he has come to this conclusion by the help of many points of view. While striving to defend the creation of the world, many people, irritatingly enough, had reproached Philoponus for not having considered the sayings of Moses when it comes to the creation of the world. Those who have reproached Philoponus are people who hold the opinion that Moses devoted himself to physics without agreement with phenomena.¹⁰

Philoponus' preface effectively continues also into chapter I.1 and I.2. There he presents the purpose of his work. Doing this he turns to Basil's *Hexaemeron*. He praises the work and Basil's merits but he also stresses that there still is one questionable feature of the work, viz., that what is embraced by faith by no means agrees with phenomena. This is something that Basil preached in the Church, according to Philoponus, who, however, carefully adds that Basil did this for the benefit of the great mass of the people (πρὸς ὠφέλειαν τοῦ

⁹ Cf. e.g. II.83–96. The discussion on the tasks of the angels is interrupted by an extensive digression 87–95 dealing with Adam's temptation and fall, and the text dealing with the angels will not continue until II.96.

¹⁰ Probably anti-Christian philosophers like e.g. Simplicius, once fellow-student with Philoponus.

πλήθους). Further, Philoponus claims that he himself, with the help of God, will try to inquire into all that which was passed over by Basil because it could not easily be grasped by ordinary people (#1).

Then Philoponus makes the important declaration that nobody can demand a systematic textbook of science from Moses. He gives several examples of what we cannot expect Moses to give an answer to. As an explanation to that deficiency he adds that Moses' purpose or σκοπός with the story of the creation was to bring people to knowledge about God. In connection with Moses' σκοπός, Philoponus makes a comparison with Plato and uses a passage from *Timaeus*¹¹ which treats the creation of the world from a philosophical point of view. Philoponus points out that Moses is the elder of the two and the first to have concerned himself with the creation of the world. According to Scholten, Philoponus establishes the order (τάξις) of the two accounts¹² and, as I see it, he makes an attempt to increase the status of Moses also among non-Christian thinkers (#7).

The differences in language and style between Cosmas and Philoponus are noteworthy. The preface to *De Opificio Mundi* seems to be written in a complicated way considering the very language. Further, there is another difference between them that raises an interesting question: Why does Philoponus in his preface first turn to those who consider the world to be 'not created'? Why does he not turn directly to Theodore of Mopsuestia, as he does in the rest of his work? To these questions I would suggest the following answers. The work *De Opificio Mundi* is a document written with the intention of refuting the conception of the world as a rectangular building with the flat earth as a floor, which was the conviction of Theodore of Mopsuestia and, in his foot-steps, that of Cosmas Indicopleustes, and with the intention also of bringing forward the conception of a spherical universe with a likewise spherical earth in the middle of it, which was the firm conviction of John Philoponus himself.

The answer to my question I have found in chapter I.1, when Philoponus hints about what he will put forward in his work, by stating that he is going to inquire into all that, which Basil did not consider fitting for ordinary people to know about. In other words, to pagan philosophers and colleagues Philoponus, by his own professional commentary to Moses' story of creation, wants not only to rank Moses in the same category as Plato, but even to put him higher. Moses' teaching is of a moral kind and not a book of science. His words are about the

¹¹ Plato, *Timaeus* 41B–D.

¹² Scholten (1995) 40.

actions of God and not about natural phenomena. To those Christian leaders of the Church who adhered to the rectangular, flat-earth world-view, Philoponus wished to prove that his own world-view, which was shared by most pagan philosophers, was not opposed to *Genesis*, or, for that matter, to any other Bible book, since the Bible is about faith and not about science. Thus I maintain that the main purpose of his work was to present his world-view as a contribution to the debate of his day and to do so by help of a commentary to Moses' story of creation (#1).

Philoponus' own view on his scholarly work, which, at the very beginning of the preface, he describes as 'syllogisms of all kinds and labyrinths hard to negotiate for the reader',¹³ could, at first sight, seem deterrent at the prospect of the reading. Besides, his own utterance seems to reflect a negative attitude towards beginning to write the work. Once in grips with the work, however, the reader will find out that *De Opificio Mundi* is not as difficult to understand as the preface suggests; rather it is logical and well-structured and well in accordance with its σκοπός, as defined in the preface.

In the last part of the preface, Philoponus makes a eulogy to a certain bishop Sergius¹⁴ and to the latter's pupil Athanasius. Philoponus declares that bishop Sergius is reckoned among God's high priests. This noble man had begged of Philoponus, sometimes even with force, to make this present investigation. Further, Sergius' pupil Athanasius had supported his master in his ambition to make Philoponus set about the work. This pupil, Philoponus states, is devoted to his master who has fostered him to virtue, and he follows him like a puppy. Philoponus demands respect for the young man who trains his reasoning power.¹⁵ In addition, Philoponus cannot but mention that the young man, Athanasius, belongs to a distinguished family. The glory of the eulogy to these two pious men somehow seems to reflect on Philoponus himself, as he is the one to have been chosen by them to fulfil the task of this investigation.

The somewhat exaggerating flattery in this passage of eulogy is out of character seen in relation to Philoponus' work as a whole and to his position. It is tempting to guess, although impossible to prove, that one reason for the exaggerations in this passage is that Philoponus felt a need to justify his scholarly and philosophical pursuits before his Christian fellowship. Had he even been threatened by the bishop? In his preface 2.6–7 Philoponus says: you have often tried to urge and persuade me, sometimes even violently (πολὺς ἐπέκεισο

¹³ *De Opf.M.* preface, 1.7–9 τοὺς τε ποικίλους τῶν συλλογισμῶν καὶ δυσδιεξόδους ἀνελίσσοντι λαβυρίνθους.

¹⁴ Bishop Sergius, later on patriarch of Antioch; cf. above (ch. 1 'Introduction').

¹⁵ This young person was Empress Theodora's nephew.

προτρέπων, μονονουχὶ καὶ βιαζόμενος). This may, partly, be conventional preface phraseology, but the word βιαζόμενος, if taken literally, implies a certain amount of coercion. Philoponus was a scholar and an experienced commentator, and he was well suited for making his contribution in the church debate of his turbulent time. Besides, there could have been a threat in the background that it would not be impossible that the school of philosophy in Alexandria could be closed in the same way as the school in Athens. In order not to offend the religious society, it probably was important for Philoponus to stand out as a Christian and not to be considered as one of the pagan philosophers.

2.4 Summary

As we have seen, both Cosmas' and Philoponus' prefaces are very clear when it comes to showing forth the aim (σκοπός) of their respective work. Cosmas stresses the necessity to scrutinize his writings in order to understand that his way to understand the structure of the world must be the true one. Cosmas' world-view, identical with that of Theodore of Mopsuestia, reckons with a universe built as a rectangular building with the firmament in the middle for ceiling and the flat earth at the bottom for floor. This world-building also contains the two conditions, the present condition, in which we humans live here on earth and which stretches from the floor up to the firmament, and the future condition or the Kingdom of Heaven, stretching from the firmament and up to the first heaven, a space in which Christ now dwells. Cosmas must have considered it to be useful for his readers to contemplate these two conditions. Cosmas, further, is careful to mention the sketches, which are intended to support his descriptions, and he certainly does succeed in evoking inspiration to read his work. When it comes to the scheme followed by philosophers and rhetoricians concerning the prefaces to their works, it is difficult, not to say impossible to apply such a scheme to Cosmas' preface. Even so the purpose of his work and its benefit for its readers are clearly pronounced.

Philoponus' preface, on the other hand, follows the mentioned scheme to some extent. This is, in fact, not surprising since Philoponus is more versed in the skill of writing than Cosmas. Still, it is not possible to apply a full scheme on Philoponus' preface either. The main purpose with Philoponus' work seems to be a strong wish to convince those who doubt that the universe had been created by God and he closely follows Moses' story of creation and comments it verse by verse. Thereby he also accomplishes another purpose of his, viz., to put

Moses above Plato both according to age and to wisdom. When Philoponus turns to Basil's *Hexaemeron*, he praises the work but points out that Basil has written it in a way available to everyone. Philoponus, on his part, will inquire into things that go beyond the capacity of ordinary, i.e., he will focus on the esoteric knowledge of the privileged few. Philoponus also states that it is wrong to demand a systematic textbook of science from Moses, since Moses' purpose with the story of the creation was to bring people to knowledge about God.

A notable thing in Philoponus' preface is his eulogy on bishop Sergius and the latter's pupil Athanasius. The flattery in this passage of eulogy, which a modern reader cannot but regard as somewhat exaggerated, is certainly unusual for Philoponus' way of expressing himself. What does this flattery stand for apart from preface phraseology? Probably some kind of threat, if not to Philoponus himself, at least to the philosophical school in Alexandria that it was going to share the same fate as the school in Athens. In order to avoid controversies with the religious establishment and secure a peaceful ground for philosophical activities, Philoponus, in the preface to *De Opificio Mundi*, devoted himself to an unusual amount of flattery.

3 Creation

3.1 Introduction

Belief in creation belongs to Christianity's inheritance from Judaism, and that God created the world and everything in it, was for early Christian thinking an axiom.¹ Of all early Christian works dealing with the six days of creation, the *Hexaemeron* by Basil the Great is probably the best known. The work consists of nine sermons on the creation of the world. Philip Rousseau writes in his book *Basil of Caesarea* that the questions which Basil thought most fitting in the Christian were, "whence he arose and whither he is going."

Basil was of the opinion that it was foolish to rely on 'worldly wisdom'. Basil meant that faith was the better alternative to too much learning, which only aimed at attracting the admiration of others. Faith, on the other hand, depended on a particular form of exegesis, the strict and literal interpretation of the text of Scripture. Scripture was a message, a series of moral instructions, directed to its readers by the Spirit; and for that reason every phrase was to be accorded its just weight.² To Basil, the Scripture's purpose was moral rather than scientific.³ That this was the purpose of Scripture was also very much the opinion of Philoponus. Further, Philoponus stresses, in accordance with Basil, that the sun was not in any way, or at any stage in time, the source of life.⁴

In this chapter, I intend to present the different commentaries on the six days of creation by Cosmas and John Philoponus, respectively. I hasten to add at the very start, that I do not intend to analyze their different views and arguments in detail, but rather just report what they write, thus allowing the facts to speak for themselves. Even without further analysis, differences between them will stand out clearly.

¹ May (1994) XIV.

² Rousseau (1994) 322–323.

³ *Ibid.* 327.

⁴ *Ibid.* 336.

This fairly extensive description of their argumentation is, however, essential for the further understanding of their views. For the ways in which Cosmas and Philoponus regard the creation of the world are fundamental for any deeper understanding of their worldview. Further, apart from revealing in a very clear manner their differences in views, it also reveals the differences in methods and approach to the material and methods of discussing.

That Philoponus and Cosmas held very different views on the creation becomes clear when we survey their respective accounts for the six days of creation. Cosmas does not give any long interpretations of his own, but, on the other hand, he tells things that have no correspondence in *Genesis*. Philoponus, on his part, interprets, if not word by word, at least sentence by sentence. He also keeps close to his aim, suggested in his preface, that he will inquire into that which it is not appropriate for ordinary people to know about.

3.2 Day one

“In the beginning God created heaven and earth. The earth was invisible and unprepared. It was darkness above the abyss and a wind of God hovered over the water. God said: ‘Let there be light’ and there was light. God saw that the light was good and God separated, midway, the light from the darkness. God named the light ‘day’, and the darkness he named ‘night’. It became evening and it became morning the first day.”⁵

3.2.1 Cosmas

Cosmas devotes chapters III.12–40 of *Christian Topography* to a fairly continuous, day-by-day comment on the story of creation in *Genesis*. In III.12 he begins to tell the remarkable story of how he, himself, understood the course

⁵ *Gen.* I.1–5 Ἐν ἀρχῇ ἐποίησεν ὁ θεὸς τὸν οὐρανὸν καὶ τὴν γῆν. ἡ δὲ γῆ ἦν ἀόρατος καὶ ἀκατασκεύαστος, καὶ σκότος ἐπάνω τῆς ἀβύσσου, καὶ πνεῦμα θεοῦ ἐπεφέρετο ἐπάνω τοῦ ὕδατος. καὶ εἶπεν ὁ θεός· Γενηθήτω φῶς. καὶ ἐγένετο φῶς. καὶ εἶδεν ὁ θεὸς τὸ φῶς ὅτι καλόν. καὶ διεχώρισεν ὁ θεὸς ἀνὰ μέσον τοῦ φωτὸς καὶ ἀνὰ μέσον τοῦ σκοτοῦς. καὶ ἐκάλεσεν ὁ θεὸς τὸ φῶς ἡμέραν καὶ τὸ σκότος ἐκάλεσεν νύκτα. καὶ ἐγένετο ἑσπέρα καὶ ἐγένετο πρωί, ἡμέρα μία. Both Cosmas and Philoponus use the *Septuagint*. Sometimes their quotations differ from the *LXX* text as we know it today; such deviations are noticed whenever relevant for this study. For comparison, or to make a particular point, Philoponus sometimes also quotes other translations than *LXX*.

of action when God created the universe and everything in it. Cosmas tells us how Moses was carried up to the mountain by God himself and had to stay there fasting during forty days and forty nights. God also hid Moses in a cloud and made him forget all about his former life and all that he had learnt when he was educated at the court in Egypt. When the fasting was coming to an end, God reshaped (διαμορφῶν) Moses, Cosmas says, and breathed (ψυχῶν) on him. When Moses was prepared in this way, God revealed to Moses through visions, how he performed the creation day by day.

On the first day of creation God made the first heaven and the earth. He made them as a huge building which contained water, air, fire mixed with earth, darkness and the angels. He created it all at once, out of nothing whatsoever. On this first day of creation God also created the light to shine like a lamp in this world-building. The light got its existence, according to Cosmas, by help of God's voice for the benefit of the angels.

We can notice that Cosmas' description of the first day of creation is not very similar to that of the Bible. In *Genesis* there is no talk of a building, but we are told that the earth was invisible and unfurnished (ἀόρατος καὶ ἀκατασκευάστος) and that a wind of God, or perhaps the Spirit of God, hovered over the water. It is remarkable that Cosmas does not mention the Spirit of God and that he does not mention the last part of the first day, which *Genesis* describes so carefully, namely, that God after he had said "Let there be light" saw that the light was good, separated between darkness and light and named the light 'day', and the darkness, 'night'.

Cosmas' commentary on the first day of creation can least of all be considered as a literalistic interpretation. On the contrary, his view that the angels were created on the first day seems to be based on preconceptions of his own. What Cosmas tells us about Moses' sojourn on the mountain for forty days and nights must be his own inventions as well, probably nourished from narratives in *Exodus*, on how Moses, on several occasions, went up to Mount Sinai in order to be together with God.⁶

3.2.2 Philoponus

Philoponus' entire work *De Opificio Mundi* is dedicated to the six days of creation and fulfils, accordingly, what its title promises. In this chapter I shall

⁶E.g., *Ex.* 19, *Ex.* 24.12-18.

take up certain general and fundamental questions that are not to be treated in the following, more specialized chapters.

In I.3, 7.8–10 Philoponus begins his *Genesis* commentary by asking the question, what is meant by the beginning (ἀρχή) when the Bible verse runs: “In the beginning God created heaven and earth.” Philoponus says that Basil the Great has enumerated many senses of the word ‘beginning’ but Philoponus, in this context, interprets the word ἀρχή as referring to the beginning of time, that very first ‘now’ when God called heaven and earth into being without any interval of time at all.⁷ Basil argues, according to Philoponus, that God made the time together with the heaven. Further, God made the heaven and the earth on the first and undivided ‘now’, which is the beginning of time. Therefore, the creation of the mentioned things is instantaneous and continuous according to the temporal beginning.⁸ Philoponus also quotes Plato: “Time, accordingly, got its existence together with the heaven, so that, what came into being together also will be dissolved together, when once a dissolution will take place.”⁹ Philoponus establishes that, to himself, the ‘beginning’ as regards the time in which God created heaven and earth, is the most important and also the truest aspect.¹⁰ Then, he passes on to other meanings of the word ἀρχή.

The rest of Book I takes up, to a great extent, the question about the angels. Cosmas considers them to be created on the first day together with heaven and earth but Philoponus is of a different opinion.¹¹

Book II.1 begins with the assertion that Moses has given instruction about the place, order and number of the elements. Philoponus, further, goes on to explain that it is because earth is heavier than water that it sunk down below the water.¹² Since fire is light and dry it has a quicker movement than air and has therefore taken its place uppermost in the universe. Between the water and the fire-sphere the air has its place and Philoponus points out that, since the prophet said “In the beginning God created heaven and earth,” he left out the order of the rest of the things which now is in the middle by saying: “And it was

⁷ *De Opf.M.* I.3, 7.11–14 τὸ πρῶτον τοῦ χρόνου νῦν, ἐν ᾧ τὸν οὐρανὸν καὶ τὴν γῆν παρήγαγεν ὁ θεὸς παντὸς χρονικοῦ χωρὶς διαστήματος.

⁸ *De Opf.M.* I.3, 8.18–23.

⁹ Plato, *Timaeus* 38B χρόνος δ' οὖν μετ' οὐρανοῦ γέγονεν, ἵνα ἅμα γεννηθέντες (in his quotation, Philoponus has γενόμενοι for γεννηθέντες) ἅμα καὶ λυθῶσιν, ἂν ποτε λύσις τις αὐτῶν γίγνηται.

¹⁰ *De Opf.M.* I.3, 9.1–4 μία μὲν οὖν σημασία τῆς ἀρχῆς, ἐν ἣ τὸν οὐρανὸν μοι τῶν ἄλλων καὶ ἀληθεστάτη φαίνεται.

¹¹ I will deal with this question in chapter 4 (‘Angels’).

¹² *Ibid.* II.1, 60.8–9 δι’ ὅπερ γῆ μὲν ὑφίζανει τῷ ὕδατι.

darkness above the abyss and a wind of God hovered over the water.” Philoponus also points out that darkness is nothing but the air which is dark because the light has not yet been created. The abyss is the concentration of all waters.

In II.2 Philoponus treats the questions why Moses has claimed that the earth was invisible and how he has taught the order of the elements. The earth was of course invisible as there was yet no light but also because the earth was covered all over with water. Philoponus further claims that Moses gave water the second place after earth in the order of the elements and then he puts in air as the third element.¹³ But where does fire come in? The totality of the element fire, which, according to Philoponus, was called the ‘fire-sphere’ by the scientists, sticks together with the air, and the two elements cannot be distinguished from each other by our perception. This might be the reason why Moses kept silent about the fire. Philoponus, on his part, considers the fire-sphere to consist of dry air.¹⁴ After further discussion Philoponus says that the passage “the wind of God hovered over the water” might explain the nature of the fire-sphere.¹⁵ Vapour is the beginning and way to the genesis of air and smoke. Dry and hot, coming from the earth, is the beginning and way to the genesis of the fire-sphere. In this way, then, the order of all the elements is made complete, since the wind is borne along with the air.¹⁶ At the very end of this chapter Philoponus summarizes by claiming that what he has said shows that Moses’ inquiring into the elements is absolutely complete.¹⁷

In II.4 Philoponus speaks of the shape of the earth.¹⁸ Thereafter he goes on to describe the earth in its unfinished state and compares it to a new-born child. He also compares it to an unequipped building as the earth was not yet adapted to housing animals or to be a habitat for plants.¹⁹

In II.6, 69.4 Philoponus makes the prompt statement that darkness is neither substance nor quality, but solely want of its opposite, light. After a rather long,

¹³ *De Opf.M.* II.2, 62.8–15.

¹⁴ *Ibid.* II.2, 62.16–22.

¹⁵ *Ibid.* II.2, 62.28–63.1.

¹⁶ *Ibid.* II.2, 63.18–21.

¹⁷ *Ibid.* II.3, 65.26–66.1 οἶμαι οὖν τὸ παρ’ ἡμῶν εἰρημένον ἐντελεστέραν τὴν Μωϋσέως περὶ τῶν στοιχείων δείκνυσι φυσιολογίαν.

¹⁸ On the question of the earth’s shape, cf, below chapter 5 (‘Spherical versus rectangular world’).

¹⁹ *Ibid.* II.5, 67.27–68.7.

philosophical discussion, he concludes with the same statement, viz., that darkness is nothing but want of light.

In II.9 Philoponus puts the question, what that very light was that came into being on God's command "Let there be light." No quality can exist without a body. Light is a quality that does exist in the sun, the moon, the stars and the fire. But on the first the day of creation none of these things existed. Philoponus gives several examples of what different commentators have said about the matter, but at the end of the chapter he has rejected all the suggestions and can only establish the fact that, by saying "Let there be light", God created light which did not exist before.

Next, Philoponus devotes one chapter (II.10) to Basil's opinion about and defence of this first created light. Basil had claimed that the sunlight came into being before the body of the sun got its existence. This was achieved through the power of God and not by nature. The power of the fire is twofold, to shine and to burn. Basil gives the example of the briar-bush, which apparently shone but did not burn.²⁰

In II.12 Philoponus arrives at the passage "And God separated, midway between, the light from the darkness. The light he named day and the darkness he named night." Philoponus points out here that light and darkness cannot exist in one place at the same time, so if darkness and light both are by themselves in different places, then the light cannot have seized the whole world.²¹ Here Philoponus, doubtlessly, has found one proof for his view that the earth is spherical. The phrase that I have tentatively translated by 'midway' (ἀνὰ μέσον) would mean to Philoponus that one half of the sphere was enlightened and the other half was in darkness. Philoponus carefully accounts for this state of things in II.14, 83.13–24.

In II.18 Philoponus further explains that the darkness of night came into existence when the light was created. Therefore it is not the same darkness that once was upon the abyss. The darkness of night appears because the earth itself blocks the way for the light. The first darkness existed since the light was not yet created. Therefore that darkness was total darkness and not the same darkness that the night causes.²²

²⁰ Cf. *Ex.* 3.1–6.

²¹ *De Opf.M.* II.12, 78.1–3 εἰ οὖν χωρὶς μὲν ἦν τὸ σκότος, χωρὶς δὲ τὸ φῶς, οὐχ ὅλον ἅμα τὸν κόσμον κατειλήθει τὸ φῶς.

²² *Ibid.* II.19, 92.6–10.

3.3 Day two

“God said: ‘Let there be a firmament midway in the water to separate water from water.’ And so it was. God created the firmament and God separated midway the water which is below the firmament from that which is above the firmament. God named the firmament ‘heaven’, and God saw that it was good. And it became evening and it became morning, the second day.”²³

3.3.1 Cosmas

Christian Topography III.14 is a rather short chapter where Cosmas gives his description of the second day of creation. He says that God built the firmament out of the water and tied it together in the middle of the height of the heaven.²⁴ Surely, Cosmas must mean that God fastened the firmament midway between his flat earth and the heaven. By fastening the firmament in the middle, God had also at the same time made two spaces, the heavenly space and the earthly space. Cosmas stresses that the lower space, right from the beginning, was meant for our present life here on earth, while the upper space was reserved in advance for our future life, which is going to be immortal and unchangeable.

In fact, in II.20, Cosmas has described the creation of the firmament on the second day of creation. Here he is more detailed but still gives his whole world-view in a nutshell. He stresses that God built the firmament out of water as if out of matter (ὡσπερ ἐξ ὕλης). This second heaven is visible and resembles the first heaven, yet not in shape. God fixed the firmament midway between the earth and the first heaven. He unfolded it and stretched it out across the whole space like a partition ceiling. Further, God tied the firmament to the first heaven, dividing and separating the rest of the waters, some of it above the firmament and some below. By doing this, God made one space into two, the upper floor and the ground floor.

²³ *Gen.* I.6–8. Καὶ εἶπεν ὁ θεός· Γενηθήτω στερέωμα ἐν μέσῳ τοῦ ὕδατος καὶ ἔστω διαχωρίζον ἀνὰ μέσον ὕδατος καὶ ὕδατος. καὶ ἐγένετο οὕτως. καὶ ἐποίησεν ὁ θεὸς τὸ στερέωμα, καὶ διεχώρισεν ὁ θεὸς ἀνὰ μέσον τοῦ ὕδατος, ὃ ἦν ὑποκάτω τοῦ στερεώματος, καὶ ἀνὰ μέσον τοῦ ὕδατος τοῦ ἐπάνω τοῦ στερεώματος. καὶ ἐκάλεσεν ὁ θεὸς τὸ στερέωμα οὐρανόν. καὶ εἶδεν ὁ θεὸς ὅτι καλόν, καὶ ἐγένετο ἑσπέρα καὶ ἐγένετο πρωί, ἡμέρα δευτέρα.

²⁴ Εἶτα τῇ δευτέρῃ ἡμέρᾳ ἐκ τοῦ ὕδατος κατασκευάζει τὸ στερέωμα, ὃ συνδεῖ καταμέσσοθεν τοῦ ὕψους τοῦ οὐρανοῦ ...

In a digression (III.31) Cosmas says that God created the firmament by making water into a solid body. By doing this in front of the angels, he taught them that he was the maker of the firmament as well as of the first heaven.

In another digression (II.15) Cosmas claims that, after Moses had told about the second day and the creation of the firmament, he said no more about celestial things but turned to earthly matters.

3.3.2 Philoponus

Philoponus begins chapter III.1 by stating that the firmament is a second heaven and is not to be mistaken for the first heaven. However, since the questions, or rather heavens, their number, nature and shape, will be dealt with in following chapters,²⁵ I leave that matter aside for the present.

III.14 is an interesting chapter dealing with ‘water’. By the term water, the Bible can refer to air, heaven, water and abyss, according to Philoponus. Thereby we can understand that water means both positive and negative things, e.g., both the Flood and the baptismal water. But how come that the air can be referred to as water? Philoponus gives the explanation. Since Moses does not have a term for what the Greeks call ‘air’, he sometimes calls it ‘heaven’ because of its connection to the heaven, or rather the firmament. Sometimes Moses calls the air ‘water’, because of the connection between air and water and because water and air easily change into each other.²⁶

Chapter III.17 is, according to Philoponus himself, a summary of what has been said about the order in which the parts of the world came into being. First he mentions the elements, commenting that it is right for them to be mentioned first, as they are the most simple. Then he claims that the heaven, being all-embracing and the utmost limit, is the foremost of the two, heaven and earth, which came into being at the same time. Further, he mentions the firmament and points out that it, too, was called heaven, since it makes all sight possible, having all the lights of heaven put into it by God. Also the air is called heaven. It is transparent, colourless and invisible by itself and is therefore able to convey light and colours down to the earth.²⁷

²⁵ Cf. below, chapters 5 (‘Spherical versus rectangular world’) and 6 (‘Heaven’).

²⁶ *De Opf.M.* III.14, 152.14–153.2.

²⁷ *Ibid.* III.17, 157.1–159.3.

3.4 Day three

“And God said: ‘Let the water below the heaven be gathered in one place, and let the dry be visible.’ And so it was. The water below the heaven gathered in its gathering-places, and the dry became visible. God named the dry ‘earth’, and the system of gathering-places of waters he named ‘seas’. God saw that it was good. God said: ‘Let the earth grow fodder grass, seed to sow, according to its own species and likeness, and fruit-trees bearing fruit with its own seed in it, according to its species on the earth. And so it was. The earth produced fodder grass, seed to sow, according to its own species and likeness, fruit-trees bearing fruit with its own seed in it, according to its species on the earth. God saw that it was good. It became evening and it became morning, the third day.’”²⁸

3.4.1 Cosmas

In *Christian Topography* III.25 Cosmas makes a short description of the third day of creation. He mentions that God gathered the water in one place and let the dry, that up to now had been hidden under the water, become visible. God named it earth. Further, God made the seas, that is to say, the sea which is called the Ocean and which surrounds this earth but belongs to the interior of the earth beyond it, and, further, the four gulfs that break into this earth from the Ocean. Then Cosmas makes an interesting remark. He maintains that God made this so, in order that the Ocean, which is stretched in between this earth and the earth beyond, should give healthy air to those people who once lived on the other side and to those who now live on this side of the earth. God also wanted the gulfs to be suitable for navigation. In this way God unites the peoples in friendship, those who have been dispersed, in that you easily can transport life-sustaining things from people to people. After this remark, in which you doubtlessly can

²⁸ *Gen.* I.9–13 Καὶ εἶπεν ὁ θεός· Συναχθήτω τὸ ὕδωρ τὸ ὑποκάτω τοῦ οὐρανοῦ εἰς συναγωγὴν μίαν, καὶ ὀφθήτω ἡ ξηρά. καὶ ἐγένετο οὕτως. καὶ συνήχθη τὸ ὕδωρ τὸ ὑποκάτω τοῦ οὐρανοῦ εἰς τὰς συναγωγὰς αὐτῶν, καὶ ὤφθη ἡ ξηρά. καὶ ἐκάλεσεν ὁ θεὸς τὴν ξηρὰν γῆν καὶ τὰ συστήματα τῶν ὑδάτων ἐκάλεσεν θαλάσσας. Καὶ εἶδεν ὁ θεὸς ὅτι καλόν. καὶ εἶπεν ὁ θεός· Βλαστησάτω ἡ γῆ βοτάνην χόρτου, σπείρον σπέρμα κατὰ γένος καὶ καθ’ ὁμοιότητα, καὶ ξύλον κάρπιμον ποιοῦν καρπὸν, οὗ τὸ σπέρμα αὐτοῦ ἐν αὐτῷ κατὰ γένος ἐπὶ τῆς γῆς. καὶ ἐγένετο οὕτως. καὶ ἐξήνεγκεν ἡ γῆ βοτάνην χόρτου, σπείρον σπέρμα κατὰ γένος καὶ καθ’ ὁμοιότητα, καὶ ξύλον κάρπιμον ποιοῦν καρπὸν, οὗ τὸ σπέρμα αὐτοῦ ἐν αὐτῷ κατὰ γένος ἐπὶ τῆς γῆς. Καὶ εἶδεν ὁ θεὸς ὅτι καλόν. καὶ ἐγένετο ἑσπέρα καὶ ἐγένετο πρωί, ἡμέρα τρίτη.

discern the merchant Cosmas, he takes up the thread from the *Septuagint* and simply says that God commanded all kinds of fruit-trees, other trees and crops to grow up out of the earth.

In the digression in the second half of III.31 Cosmas claims that, while the angels discussed and closely observed the things belonging to the earth, God gathered the water and let the dry element be visible. He named it earth. Thereafter, he produced from the earth seed, grass, all kinds of crops and trees. Thereby he taught the angels, that he could make use of each of his creations according to his own will.

3.4.2 Philoponus

In *De Opificio Mundi*, starting from IV.1, 159.15, Philoponus makes his commentary of the first part of the third day of creation. He asks the question why God did not finish his creation work of the celestial things before he went on with the earthly things. Philoponus points out that he several times has explained, that *Genesis* was written as an introduction to knowledge about God, for those who had been brought up in Egypt and had become defiled by the godless cult of the Egyptians. Then Philoponus explains that most barbarians do believe the sun, moon and stars to be gods. The sun, in particular, was considered to bring forth fruit. Therefore it was important to Moses to stress that sun, moon and stars were not created until after the plants had grown from the earth. This was all achieved on God's command.

In IV.3, 164.5 Philoponus states that, at the same time as God commanded the water to gather, certain places of the earth became hollowed out into depths, while other places were raised on high. The mountains we can see today rising high above the earth should thus be matter which was drawn from the hollows that became the gathering-places for the water. This is indeed a clever explanation of the genesis of seas and mountains, which is easily adapted to the creation story of the *Genesis*.

In IV.5, 168.1 Philoponus polemizes against the geographers who have written books on geography and who claim that the Ocean encircles the whole earth. He denies that the Ocean is one and refers to the *Septuagint*, which says that God named the waters 'seas' (θαλάσσας in the plural). Philoponus quotes what the geographers teach, a quotation that, by the way, corresponds very well with what Cosmas says in *Christian Topography* II.29–32. Philoponus, however, refutes this view and attaches himself to Ptolemy and Pappus who

claim that the Ocean limits the earth only in the west and that the Atlantic is not connected with what we would call the Indian Ocean.

In IV.5, 171.15 Philoponus says that anyone who follows the cited geographers would say that the same sea can be both one single and many. One single, as it is a connected whole and encircles all, many, as several of its gulfs are separated from each other, not by water but by a boundary of its own. Philoponus claims that this classification is wrong, since the geographers offer no proof that the allegedly natural boundaries actually exist. Instead, names like ‘Iberian Sea’ seem to be given quite arbitrarily to certain sections of the water.

In IV.6, 172.17 Philoponus asks the question why God ordered the water to gather in one place and why Moses says “The gathering-places he named seas.” A long, philosophical discussion about the usage of the singular and the plural follows. In IV.6, 174.2–7 Philoponus gives an answer: the singular marks the all-embracing kind or species of all individuals, whereas the plural marks the individuals under the species.²⁹ As one example of many, Philoponus says that ‘the church’ in singular stands for Christ’s Church in the whole world and that, of course, the plural stands for all different churches in different countries.

In the following chapter IV.7, 176.12 Philoponus stresses that it is not only as to water, but as regards almost everything that the divine command is given in the singular while the performance of the work is stretched out in the plural.

In IV.9, 179.4 Philoponus claims that it is likely that neither lakes nor rivers did exist until the world was completed. In order to stress that he is right in his presumption, he quotes Basil, who has come to a similar conclusion in his *Hexaemeron* IV.4.³⁰

In IV.10, 180.3 Philoponus passes on to interpret the passage that says “God named the dry earth” and he states that it was with good reason, since earth is the proper name for the dry, even if it is flooded with water. Moses was quite right, since the opposites of two qualities, like warm and cold, dry and damp make the four elements, if they are bound together in pairs that are not contrary to each others. Warm and dry make fire, warm and damp make air, cold and dry make earth, cold and damp make water. Each element is described by what is predominant in it, fire by the warm, air by the damp, water by the cold and earth by the dry. Moses, accordingly, followed the natural power of the elements, as

²⁹ Καὶ τὸ μὲν ἐνικὸν τὸ περιεκτικὸν δηλονότι τῶν καθ’ ἕκαστον ἀπάντων εἶδος ἢ γένος ὑπάρχον σημαίνει· τὸ δὲ πληθυντικὸν τὰ ὑπὸ τὸ εἶδος ἄτομα.

³⁰ Ὑπομνηστέον δὲ κάκεῖνο Βασιλείῳ καλῶς εἰρημένον ὅτι συναγωγὰς καὶ συστήματα μέγιστα ἀκουστέον καὶ ταύτας κληθῆναι θαλάσσας, ὧν καὶ πρὸ τούτων ἐμνήσθημεν, οὐ γὰρ δὴ λίμνας ἢ τέλματα ἢ τοιαύτας τινὰς ἀθροίσεις ὑδάτων.

the earth is predominated by dry in quality, when he says that “God named the dry ‘earth’.”³¹

In a short section, IV.10, 182.17–183.11, Philoponus mentions the command that the earth was to produce crops. He refers to what he has said before, that this command was carried out before the celestial bodies were created. Here he points out that this fact supports the opinion that the world has a beginning of its existence. Thereafter Philoponus makes a reference to Basil’s *Hexaemeron*.³² Philoponus means that Basil has described the creation of the vegetation of earth in a brilliant way, suitable for everyone’s ear. Philoponus himself passes on to the fourth day of creation.

3.5 Day four

“And God said: ‘Let there be lights in the firmament of heaven to separate day from night. And let them be signs for seasons, days and years. Let them be lights in the firmament of heaven to shine upon the earth. And so it was. God made two great lights, the greater to rule over the day and the lesser to rule over the night, and he made the stars. God put them in the firmament of heaven to shine upon the earth and to rule over day and night and to separate light from darkness. And God saw that it was good. It became evening and it became morning, the fourth day.’”³³

³¹ *De Opf.M.* IV.10, 181.15–17.

³² Cf. de Mendieta & Rudberg (1997) 69–86.

³³ *Gen.* I.14–19 καὶ εἶπεν ὁ θεός· Γεινηθήτωσαν φωστῆρες ἐν τῷ στερεώματι τοῦ οὐρανοῦ εἰς φαῦσιν τῆς γῆς τοῦ διαχωρίζειν ἀνὰ μέσον τῆς ἡμέρας καὶ ἀνὰ μέσον τῆς νυκτὸς καὶ ἔστωσαν εἰς σημεῖα καὶ εἰς καιροὺς καὶ εἰς ἡμέρας καὶ εἰς ἔνιαυτοὺς καὶ ἔστωσαν εἰς φαῦσιν ἐν τῷ στερεώματι τοῦ οὐρανοῦ ὥστε φαίνειν ἐπὶ τῆς γῆς. καὶ ἐγένετο οὕτως. καὶ ἐποίησεν ὁ θεὸς τοὺς δύο φωστῆρας τοὺς μεγάλους, τὸν φωστῆρα τὸν μέγαν εἰς ἀρχὰς τῆς ἡμέρας καὶ τὸν φωστῆρα τὸν ἐλάσσων εἰς ἀρχὰς τῆς νυκτὸς, καὶ τοὺς ἀστέρας. καὶ ἔθετο αὐτοὺς ὁ θεὸς ἐν τῷ στερεώματι τοῦ οὐρανοῦ ὥστε φαίνειν ἐπὶ τῆς γῆς καὶ ἄρχειν τῆς ἡμέρας καὶ τῆς νυκτὸς καὶ διαχωρίζειν ἀνὰ μέσον τοῦ φωτὸς καὶ ἀνὰ μέσον τοῦ σκότους. καὶ εἶδεν ὁ θεὸς ὅτι καλόν. καὶ ἐγένετο ἑσπέρα καὶ ἐγένετο πρωί, ἡμέρα τετάρτη.

3.5.1 Cosmas

In *Christian Topography* III.26, Cosmas begins his interpretation of what happened on the fourth day of creation. On that day, God divided the light into small pieces, according to Cosmas. From the purest of these pieces he made the sun and from the rest he made the moon and the stars. Then he ornamented the celestial regions in an all-harmonious way. He created order and harmony in the universe and he gave task and law to the invisible powers to serve, to help and to be at hand to God's image, man, and to all that had been created for man's benefit. In III.27 Cosmas explains that, by breaking the law given to them, some angels have been cast down from heaven and have been deprived of their dignity.

In a digression in III.32 Cosmas claims that the vegetation, which had come into existence on the third day, needed proper climate and order. Therefore, God made the celestial bodies and the stars from the light that he had created before. After that, God placed the angels on the firmament and ordered them to put the stars as well as the air into movement. Further, he ordered the angels to make the stars to rise and set and to turn in circles. This order was given in order to give the plants, and all that was going to need it, a proper climate. The vegetation, like everything else, could be able to refresh itself from the movement of the air when the celestial bodies had gone down and to enjoy the warmth when they were risen.

3.5.2 Philoponus

In *De Opificio Mundi* IV.11, Philoponus begins his interpretation of the fourth day of creation. Philoponus means that God, by creating the great celestial bodies, created the natural separation between light and darkness. When the celestial bodies had got their existence, God ordered them to separate between day and night. It was no longer a question of light and darkness but of day and night. God wanted the light and the givers of light, the celestial bodies (φωστῆρες), to be something other than only simple quality. This other was the composition of the underlying body and the simple quality, and it was named celestial bodies.

Next, Philoponus explains that the difference of the bodies, which underlie the light, is the reason for the difference of light emanating from the different celestial bodies. This is also valid for fire below the moon.³⁴ God first made the

³⁴ *De Opf.M.* IV.12, 184.12–15.

species (εἶδος) of light, according to Philoponus, with simple nature and without any variance. Now on the fourth day, however, he made the underlying body and by joining them together, he created the celestial bodies. The reason why the celestial bodies differ so much in light depends on the underlying body. For instance, the stars differ very much in size, colour and luminosity. According to Philoponus, the reason for this lies in the blending of the underlying body with the pure light.

In IV.13, 185.14 Philoponus brings up an interesting subject for discussion. Is it possible for the light to exist without celestial bodies? Philoponus wants his reader to consider what is close at hand. Only fire has luminosity and at the same time combustibility, and it is impossible to separate the one from the other, according to Philoponus. Following Aristotle you might say that the celestial bodies have luminosity but that they do not burn. Following Plato you might say that the celestial bodies mostly consist of fire. Philoponus asks his reader to consider things here on earth, such as the glow-worm, which sends up light during the night but has no share in burning. This is not due to the smallness of the worm, for even the smallest fire-sparks are burning hot. Other small things, though, which have no luminosity may have potential combustibility. The nature can bring about this but man cannot. Moses meant that the burning briar-bush belonged to the category of wonders. Philoponus also asks the question why it should have been impossible for God, who has created everything out of nothing, to let light exist without celestial bodies?

In IV.15, 189.12 Philoponus points out that God did not say: “Let the firmament bring forth stars.” Thus, he claims that the stars did not come into being by an emanation of matter from the physical entity of heaven, i.e., the firmament. The phenomena prove that, for the firmament is transparent and therefore related to air and to water. The stars, on the other hand, are of fiery matter which their qualities show, colour and light, their warmth and their mutual blocking of lights. Only two of the simple elements have that quality, earth and fire (and by ‘fire’ Philoponus here means the flame). Therefore the Bible-passage runs “Let there be celestial bodies in the firmament of heaven”, since they are made of another substance than the firmament and have been put into the firmament from outside.

In IV.16 Philoponus brings up the question why the moon is named a great celestial body while there are stars still bigger than the moon. Those who occupy themselves with astronomy claim that e.g. the Dog-Star (Sirius) is much bigger than the moon. Philoponus explains that both sun and moon are in the position to light up the transparent because of the amount of light they both

radiate. The stars are not in a position to do that. A star cannot light up the earth but the moon can, even if it is not full but half and still smaller. All the stars together cannot light up the earth, even if their combined magnitude by far surpasses many suns and still more moons, according to Philoponus. The moon, which is unique, makes shadows with our bodies and simply with everything. All the stars of heaven, however, do not, except perhaps the morning-star (Venus). Therefore, next to the sun, the moon has greater luminosity than all the stars together.

In IV.17, 192.11 Philoponus discusses the meaning of the Bible passage “...the sun to rule over the day and the moon to rule over the night”. Someone could suppose, on good grounds, he says, that the sun rules together with the day and the moon together with the night. But this cannot be said, according to Philoponus, since the sun is the maker of the day. ‘Day’ means simply that the sun is above the earth. The moon, on the other hand, rules together with the night on one single occasion during the month. This happens when the moon is full, for then the moon can be seen during one whole night. The following days it recedes, piece by piece, as it gets closer to the sun. You can say that the moon rules over the night, since its light always overcomes the darkness and weakens the light of the stars. You can say that the sun has the power over the condition that belongs to the day. In the same way the moon has the power over the condition that belongs to the night. This applies not only to the light, but the moon also influences bodies under the moon and causes them to change. During the night the moon warms up the air a little, extracts vapour out of it and creates a damp condition. This, in turn, brings nourishment to the vegetation. It can be seen in hard-shelled animals, for they are well-fed around full-moon but poorly nourished the other days.

Philoponus ends this chapter by mentioning the benefit for animals and plants that the sun achieves. It is the sun that makes the seasons and the change of the elements into each other. It is also the sun that makes the plants sprout from the earth, makes them grow and ripen and so on. About what concerns the size of the moon and the changes in bodies that the moon achieves, Philoponus refers to Basil and says that the readers can derive best use of him.

From chapter 18 to the end of book IV (195.3–204.79) Philoponus discusses what he refers to as ‘the astrological method’ (ἡ ἀστρολογικὴ μέθοδος). The astrological method confutes itself, according to Philoponus; it does not effect what happens to us (μὴ ποιητικὴ τῶν συμβαινόντων ἡμῖν ὑπάρχουσα). Philoponus once again refers to Basil, whom he claims to have refuted the

method sufficiently. In spite of that, Philoponus does not content himself with referring to Basil, but brings in Origen as well. In a lengthy discussion he quotes and paraphrases from Origen's commentary on *Genesis*.³⁵ The method of practising astrology (γενεθλιαλογία) he refers to as something which estranges its adherents from God. He stresses that to occupy oneself with astrology is hateful to God and something that causes an unhappy life. He quotes Porphyrius, who says that the astrology is not a work of skill but of chance. Men are ignorant about it and the gods do not understand it.³⁶ Later on in the same chapter, Philoponus once more stresses that astrology is not a skill, it is something which is demoniacal.

By this short account I hope to have made it clear that Philoponus totally repudiates astrology. Evidently, Philoponus regards the stars only as physical objects, not investing them with angelic or other supernatural powers, as Cosmas and others were prone to.

3.6 Day five

“And God said: ‘Let the waters produce creeping living creatures and birds flying above the earth, across the firmament of heaven.’ And so it was. And God created the huge sea-monsters and all kinds of creeping living creatures that the waters produce, according to their species, and all kinds of flying birds according to their species. And God saw that it was good. And God blessed them and said: ‘Multiply, spread out and fill the waters in the seas and let the birds multiply on the earth.’ And it became evening and it became morning, the fifth day.”³⁷

³⁵ Cf. Scholten (1997) 438, n. 83.

³⁶ *De Opf.M.* IV.20, 199.6–8.

³⁷ *Gen.* I.20–23 Καὶ εἶπεν ὁ θεός· Ἐξαγαγέτω τὰ ὕδατα ἕρπετὰ ψυχῶν ζωσῶν καὶ πετεινὰ πετόμενα ἐπὶ τῆς γῆς κατὰ τὸ στερέωμα τοῦ οὐρανοῦ. καὶ ἐγένετο οὕτως. καὶ ἐποίησεν ὁ θεὸς τὰ κήτη τὰ μεγάλα καὶ πᾶσαν ψυχὴν ζῶων ἕρπετῶν, ἃ ἐξήγαγεν τὰ ὕδατα κατὰ γένη αὐτῶν, καὶ πᾶν πετεινὸν πτερωτὸν κατὰ γένος. καὶ εἶδεν ὁ θεὸς ὅτι καλά. καὶ ἠλόγησεν αὐτὰ ὁ θεὸς λέγων· Αὐξάνεσθε καὶ πληθύνεσθε καὶ πληρώσατε τὰ ὕδατα ἐν ταῖς θαλάσσαις, καὶ τὰ πετεινὰ πληθυνέσθωσαν ἐπὶ τῆς γῆς. Καὶ ἐγένετο ἑσπέρα καὶ ἐγένετο πρωί, ἡμέρα πέμπτη.

3.6.1 Cosmas

As regards the fifth day of creation, Cosmas actually has very little to say. In *Christian Topography* III.34 he simply paraphrases the words of *Genesis* and says that God ordered different living animals to be produced from the waters according to their species, sea-monsters and other water animals, and at the same time also all the birds that fly in the air. That is all.

However, in a digression in III.36–38, he writes again about the fifth day, and there his account is certainly not in accordance with *Genesis*. He claims that when the living creatures were produced from the waters, the angels learnt that God also was the maker of this water that was created together with them.

3.6.2 Philoponus

Philoponus, on his part, has ever so much more to tell us about the fifth day of creation. In *De Opificio Mundi* V.1, 205.1 he starts with the question why the creatures living on the earth were not created before the creatures in the water. When the heaven was complete and vegetation was at hand on the earth, it would have been natural if the land-living creatures had been created first, but this did not happen. First the water-creatures came into existence and thereafter the birds. Philoponus begins his explanation in V.1, 206.5 and continues to the end of the chapter. Some bodies under the moon are animated, some are not, he says. The simple bodies or the elements came first into being, before all composite things animated or unanimated. No simple things are animated and therefore the elements are not. This can be learnt by perception.³⁸ Three things are hallmarks of the animated: nourishment, growth and reproduction of like. Therefore it can be said that plants, as they have a share of these criteria, have a ‘plant-soul’. That the elements are not animated can be proved if we consider that the body serves as a tool for that which is animated. None of the elements serves as a tool, therefore it is not animated.

When the elements had been created, God ordered the earth to bring forth the plants, which have a share of the lowest form of life. The plants live and die, are young and old, can be healthy or ill, but they have no share in perception and they cannot move on earth. The next living creatures to be created were the water-creatures. The water was also the second thing to be created after the

³⁸ Although he refers his readers to their own powers of perception, Philoponus here closely follows Aristotle’s description of the soul in his *De Anima*.

earth. The water-creatures have some perception. They can perceive danger and flee from it but they cannot be tamed and, besides, they lack voice.

After the water-animals the birds came into being. They have got more distinct perception than the water-animals but, for the most part, they cannot be tamed, especially those flying very high.

The animals living on the earth, Philoponus says, are more complete than the others. They are conscious and have a share in a perception that comes near to reason. As a proof, he cites moving examples of dogs showing great loyalty to their masters.

Then Philoponus mentions the most complete of all living creatures, man. He points out, that the creation of the nature of man takes place in the same succession as the nature in whole. The seed sinks unanimated into the womb where it lives a plant-like life, gets nourishment and grows. As the coming into being advances, the foetus develops, gets animated and becomes a living creature. Finally, it is allotted reason and at the time of birth it is a complete human being.

In V.2, 210.19 Philoponus points out that, when the Bible-passage runs “Let the waters produce”, the air is involved as well, since these two elements are related to each other. Moses does not mention the air in the creation story, Philoponus points out, since he did not know this word at all. This is perhaps because the Hebrew word for water and air is the same, but perhaps also because the common nature of water and air is very great, Philoponus suggests. Both are damp and floating, transparent and permeable to smell and sound. Water and air change easily into each other and the air is easily chilled by water in its neighbourhood, while water is warmed by the warmth of the air.³⁹

V.3, 212.1–213.16 is a short chapter telling the difference, or rather the similarity, between water-animals and birds. Both have wings, the ones to swim in water, the others to swim in the air. The birds, however, have larger wings since air is thinner than water. Both control the body by the tail-fin or the tail-feather. Both species lay eggs. Moses has said, according to Philoponus, that water-creatures and birds have their common origin from the damp substance. For this substance Moses never uses the word air, but often the word water.

V.6, 217.1 to the end of the chapter tells what is meant by reptiles (έρπετά). Such animals which have no feet but lie on the ground are named έρπετά, since ‘earth’ is έρα in Greek and the adverb έραζε ‘to the ground’ is derived from that word. Έρπετά mean ‘those who have fallen to the ground’. Philoponus further explains that the fishes lie on the belly in the water and the birds on the air,

³⁹ *De Opf.M.* V.2, 211.11–27.

moving themselves by help of fins and wings. The Bible, Philoponus says, divides the ἔρπετά in two, fishes and birds.

In V.9, 221.3–17 Philoponus stresses that it was with good reason that God did not order the celestial bodies to “grow and multiply” and to “fill up the heaven.” God had not given them a natural succeeding progeny, nor death or birth, but they were to remain in quality and quantity as God made them from the beginning. Still this does not show that the celestial bodies are imperishable, and Philoponus quotes Plato: “Out of necessity it is prescribed to all that is born that it also will perish.”⁴⁰ Philoponus says a little later in this chapter that, if all was created by God immediately and without any space of time, God would also, should he wish to destroy something of these things, do so without any space of time.⁴¹

3.7 Day six

“And God said: ‘Let the earth produce living beings according to their species, quadrupeds, reptiles and beasts.’ And so it was. And God made the beasts, the cattle and the reptiles of the earth, according to their species. And God saw that it was good. And God said: ‘Let us make man in our image and likeness, and let them rule over the fishes in the sea, the birds of the heaven, all animals and the whole earth and over the reptiles creeping upon the earth.’ And God made man in his own image, he made them male and female. And God blessed them and said: ‘Multiply and increase, fill the earth and subdue it, rule over the fishes in the sea, the birds of the heaven, all animals and the whole earth and over the reptiles creeping upon the earth. I give you all crop to eat, all over the earth, seed with grain in it and all trees that bear fruit with seed. And to all the animals on the earth, and all the birds of the heaven, and all the reptiles creeping on the earth, every living creature I give all green crops for food.’ And so it was. And God saw all that he had made and saw that it was very good. And it was evening and it was morning, the sixth day.”⁴²

⁴⁰ The text in Plato, *Republic* 546A runs: γενομένω παντὶ φθορὰ ἐστίν. Philoponus ‘quotes’ this as παντὶ γενομένω φθορὰ ἔπεστι ἐξ ἀνάγκης.

⁴¹ *De Opf.M.* V.9, 222.7–9.

⁴² *Gen.* 1.24–31 Καὶ εἶπεν ὁ θεός· Ἐξαγαγέτω ἡ γῆ ψυχὴν ζῶσαν κατὰ γένος, τετράποδα καὶ ἔρπετά καὶ θηρία τῆς γῆς κατὰ γένος. καὶ ἐγένετο οὕτως. καὶ ἐποίησεν ὁ θεὸς τὰ θηρία τῆς γῆς κατὰ γένος καὶ τὰ κτήνη κατὰ γένος καὶ πάντα τὰ ἔρπετά τῆς γῆς κατὰ γένος αὐτῶν. καὶ εἶδεν ὁ θεὸς ὅτι καλὰ. καὶ εἶπεν ὁ θεός· Ποιήσωμεν

3.7.1 Cosmas

In the second part of *Christian Topography* III.34, Cosmas briefly describes what happened on the sixth day of creation. First God let the earth produce domestic cattle, wild animals and reptiles, according to their species. Having equipped the whole house completely and in harmony, God acted in the same way as a king, who, having built a city, places his own image, beautifully painted and adorned, in the city. God gathered all his different creations. There were creatures with reason and without, mortal and immortal, corruptible and imperishable, perceptible by the senses or by reason. From all these natures God made a living creature, man, whom he placed in the ready-made house as the image of God himself. And man, on his part, is well aware that God alone is the creator of the universe.

III.35 is rather a song of praise than anything else. Cosmas tells us that the angels admire the image of God and therefore care for and serve man. The same is valid for all the creation. The sun makes the day perfect for man. The moon and the stars brighten up the darkness at night and accomplish their orbits for the sake of man. They also accomplish months, seasons, solstices and years. They have all been created to be landmarks for those people who sail the wide seas and for those walking in the desert. The air serves the image of God for breathing, cooling and creating bodily well-being (εὐκρασία). The fire serves to bake bread, to warm, to light up during the night, to cooking and to other needs. The water serves to drink, to wash, to knead a dough, for irrigation and for many other needs. The earth serves as dwelling-place and to produce all kinds

ἄνθρωπον κατ' εἰκόνα ἡμετέραν καὶ καθ' ὁμοίωσιν, καὶ ἀρχέτωσαν τῶν ἰχθύων τῆς θαλάσσης καὶ τῶν πετεινῶν τοῦ οὐρανοῦ καὶ τῶν κτηνῶν καὶ πάσης τῆς γῆς καὶ πάντων τῶν ἔρπετων τῶν ἐρπόντων ἐπὶ τῆς γῆς. Καὶ ἐποίησεν ὁ θεὸς τὸν ἄνθρωπον, κατ' εἰκόνα θεοῦ ἐποίησεν αὐτόν, ἄρσεν καὶ θῆλυ ἐποίησεν αὐτούς. καὶ ἠλόγησεν αὐτοὺς ὁ θεὸς λέγων· Αὐξάνεσθε καὶ πληθύνεσθε καὶ πληρώσατε τὴν γῆν καὶ κατακυριεύσατε αὐτῆς καὶ ἄρχετε τῶν ἰχθύων τῆς θαλάσσης καὶ τῶν πετεινῶν τοῦ οὐρανοῦ καὶ πάντων τῶν κτηνῶν καὶ πάσης τῆς γῆς καὶ πάντων τῶν ἐρπόντων ἐπὶ τῆς γῆς. καὶ εἶπεν ὁ θεός· Ἴδου δέδωκα ὑμῖν πᾶν χόρτον σπόριμον σπείρον σπέρμα, ὃ ἐστὶν ἐπάνω πάσης τῆς γῆς, καὶ πᾶν ξύλον, ὃ ἔχει ἐν ἑαυτῷ καρπὸν σπέρματος σπορίμου ὑμῖν ἔσται εἰς βρῶσιν καὶ πᾶσι τοῖς θηρίοις τῆς γῆς καὶ πᾶσι τοῖς πετεινοῖς τοῦ οὐρανοῦ καὶ παντὶ ἔρπετῷ τῷ ἔρποντι ἐπὶ τῆς γῆς, ὃ ἔχει ἐν ἑαυτῷ ψυχὴν ζωῆς, πάντα χόρτον χλωρὸν εἰς βρῶσιν. καὶ ἐγένετο οὕτως. καὶ εἶδεν ὁ θεὸς τὰ πάντα, ὅσα ἐποίησεν, καὶ ἰδοὺ καλὰ λίαν. καὶ ἐγένετο ἑσπέρα καὶ ἐγένετο πρωί, ἡμέρα ἕκτη.

of fruit-trees and other trees. The four-footed animals supply man with the pleasures of the table and with clothes. The cattle give him help and rest, the wild animals the thrill of hunting, as also the reptiles. All serve to train man's reason and to provide him, who is the bond of friendship of all creation, with the necessities.

And Cosmas continues his eulogy of man: His stature is upright, which enables him to watch the heaven, his future abode. Man is king over heaven and citizen there together with the celestial citizens. The whole creation makes its utmost, in obedience to God, in order to maintain his benevolence, to serve man in his capacity of God's image.

In the second part of the small digression III.36 Cosmas says that the angels, being onlookers of the creation, saw all that had been created during the six days. They saw that the works were varied and wonderful, magnificent and worthy of admiration. They did not see, however, any creature similar to themselves, equipped with reason, invisible and perceptible to reason.

In III.37, Cosmas proffers an explanation for the creation of man, typical of him: The angels began to suspect, he says, that there was one creator for those creatures who were equipped with reason and who were invisible and perceptible to reason only, and another one for the beings without reason, who were visible and perceptible to the senses. In order to undeceive them, God created man out of all the natures, of rational and irrational, of that which is perceptible to the senses and of that perceptible to reason, of visible and invisible. And God gave man the position of being his image and made it clear that there is only one creator.

In III.43–45, Cosmas does not say anything new but repeats what he has already said about man's position in the hierarchy of creation. Here he points out once again man's stature and his ability to look up to heaven.

In connection with the creation of man, it is difficult to pass over the creation of woman without further comment, since Cosmas offers a remarkable explanation in III.47, where he stresses the equality between man and woman. God made the woman from the side of the man.⁴³ The two sides of the body are equally important, for they bind the whole body closely together. God did not create the woman from the man's front, in order that she might not get advantage over the man. But he did not create her from the man's back either, in order that the man might not get advantage over the woman. He created her from the man's side, since she is like the man by nature. Even if the man is before her, the reason for

⁴³ Ἐκ τῆς πλευρᾶς τοῦ ἀνδρὸς τὴν γυναῖκα πεποίηκεν ὁ Θεός.

this is time. He is not superior to her by his nature. Further, since the arm all the time covers and protects the side, God created female out of male and male out of earth and called on them both to become one flesh. So he did because of the identical construction of the two sides, but also because of the fruit of their union. Therefore, that man is a sinner who commits adultery and draws back from his own flesh and sows his wild oats. The one who commits adultery places himself among murderers, for he rips apart the united flesh and thereby commits a murder.

3.7.2 Philoponus

Philoponus begins his exegesis of the sixth day of creation in *De Opificio Mundi* V.11, 224.8, starting from the passage where God orders the earth to produce living beings. The souls of the creatures devoid of reason cannot exist without the bodies they are in. They get into the bodies at birth and are destroyed together with the bodies. It is the soul that lives and is the most important part and because of the soul the whole creature is named 'living being'. Therefore the living beings, which were produced on the sixth day, four-footed animals, beasts, reptiles and cattle, are no souls, but they are living beings consisting of body and soul.

In V.13, 227.4 Philoponus continues to comment on the living beings. He says again that the soul has no life outside the body. The body stands for nutrition, growth and movement from place to place. The ability of perception cares for the well-being of the body, e.g., to be able to feel warm and dry, in other words to be able to choose what is useful and to avoid the harmful. Once again Philoponus stresses that it is not possible that the souls without reason exist before the bodies do, or exist after the death of the bodies.

In V.12, 225.15 Philoponus explains the difference between beasts and cattle. In older times all of them used to be called animals (θηρία). The beasts are wild and are no social beings. They are aimed to be food for humans. The cattle are aimed to be helpers to humans.

In VI.1, 229,17 Philoponus deals with the question why the creation of man is described in such detail by Moses. Man is far behind many other beings in beauty, strength and length of life. When other things in the world were created, God ordered and it was so. When the light was created, e.g., God said: "Let there be light", and so it was. But when man was created, the creation was preceded by a careful reflection. When it is said: "Let us make man in our image and likeness", then the Bible passage makes it clear that the nature of

man has a special status before all the others. Man is shorter of stature and has a shorter length of life than many of the other created beings, e.g., the celestial bodies. In beauty many birds and flowers surpass man, and still it is man who is the image of God; only man was bestowed with full reason.

In VI.5 Philoponus states that there are those who, not in conformity with the word, interpret *κατ' εἰκόνα* as referring to the Son. Paul says about the Son "...who is image of the invisible God",⁴⁴ Jesus himself declares "Anyone who has seen me has seen the Father",⁴⁵ and there are other similar statements as well. Philoponus agrees that he can understand the point of those who believe that these words refer to the Son. Then man would have been created in the image of the Son. But that is not Philoponus' own view. For guiding he turns from *LXX* and to other translators; he quotes both Aquila ("In image of us and in likeness of us" (*Ἐν εἰκόνι ἡμῶν καὶ καθ' ὁμοίωσιν ἡμῶν*)), Theodotion ("In image of us, in likeness of us" (*Ἐν εἰκόνι ἡμῶν, ἐν ὁμοιώμασιν ἡμῶν*)) and Symmachus ("As an image of us and in likeness of us" (*Ὡς εἰκόνα ἡμῶν καὶ καθ' ὁμοίωσιν ἡμῶν*)). These three translations show us, according to Philoponus, that man has not been created in that special image of God that the Son represents, he who is the image of the invisible Father. Man was created solely in image of 'us' (*ἡμῶν*), and 'us' here stands for *θεός*, i.e., the divinity that is the distinguishing, common feature of the triune Godhead.

In VI.7, 241.3 Philoponus explains the difference between *καθ' ὁμοίωσιν* and *καθ' εἰκόνα*. 'In likeness' can include a good way of life of our own choice and an adjustment into likeness to God, and Philoponus stresses what he has said using Bible passages as examples: "Be merciful as your Father is merciful,"⁴⁶ and "Be perfect as your heavenly Father is perfect."⁴⁷ Philoponus then says that he believes that man was created 'in image' at once, but only potentially is in possession of 'in likeness'. The sensible substance, however, is suited to receive this when, by true knowledge, a pure life and foresight of what he needs, he has become in likeness of God. This is imitation of God. A little later (242.11) Philoponus points out that wise men 'outside'⁴⁸ reckon philosophy to be a way to become 'in likeness'. I suggest that what Philoponus has been talking about here, is what we usually call 'sanctification'.

⁴⁴ *Colossians* 1.5 "Ὁς ἐστὶν εἰκὼν τοῦ θεοῦ τοῦ ἀοράτου.

⁴⁵ *John* 14.9 "Ὁ ἐώρακώς ἐμέ ἐώρακε τὸν πατέρα.

⁴⁶ *Luke* 6.36 Γίνεσθε οὖν οἰκτίρμονες, καθὼς καὶ ὁ πατὴρ ὑμῶν οἰκτίρμων ἐστί.

⁴⁷ *Matthew* 5.48 "Ἔσεσθε οὖν ὑμεῖς τέλειοι, ὡς ὁ πατὴρ ὑμῶν ὁ οὐράνιος τέλειός ἐστιν.

⁴⁸ Probably 'outside the church'.

Philoponus finishes this chapter by saying that the word ‘in image’ is valid for all humans but it does not involve the meaning ‘to become in the likeness of God by a pure way of life’. ‘In likeness’ is something which is valid only for a few, namely, those who can say with Paul: “I do not live any more, Christ lives in me.”⁴⁹

In VI.19, 270.3 Philoponus points out that the words ‘in image’ and ‘in likeness’ are said to man and woman in common. It is only valid for reason and not for body. ‘In image’ and ‘in likeness’ said to man and woman as to one single substance provides one and the same definition for both sexes: mortal beings equipped with reason. Common to both sexes is also virtue and the possibility to become like God. The shape of the body is different and the genitals are, according to the doctors of medicine, turned in opposite directions. Therefore it is quite clear that ‘in image’ and ‘in likeness’ has no reference to the body but solely to reason. Both sexes can also by virtue become like God and can rule over the other living beings. “In Christ there is no male and female”, according to the apostle.⁵⁰ Philoponus also stresses, that man alone was created with the substance (οὐσία) of reason in the image and likeness of God. Only man can therefore, by virtue of reason, rule over the living beings.

In VI.20, 271.8 Philoponus says that not all living beings are divided in male and female. No other share a common life with another being of the same species. Only humans have a common life under the same roof, in one house. The male brings a female into the house as a member of the household, and both have the same manner of life. Since God wanted to insert this natural relation in man he created the male first to rule and work. Thereafter he made female out of the male’s rib and made her from the beginning obedient and passionate. Female was created of male’s rib to become bedfellow since the ribs, being related, fit into each other. Therefore a natural is love inserted in her to compulsory relations which bind the related ones together. From their union the rest of their species have been created. This is also the reason why only humans live together with others as citizens, live together and work together according to sexes, cities, peoples, kinships and houses.

⁴⁹ *Galatians* 2.20 Ζῶ δὲ οὐκέτι ἐγώ, ζῆ δὲ ἐν ἐμοὶ Χριστός.

⁵⁰ *Galatians* 3.28 Οὐκ ἔστι ἐν Χριστῷ ἄρσεν καὶ θῆλυ.

3.8 Summary

As already stated, this is a chapter in which we have been reporting on rather than discussing or analyzing the treatment of the six days of creation by the two authors. However, the presentation opens itself to some observations on the different outlooks of the two writers. Not only do they differ in their views, which is apparent enough, but their methods of thinking and ways of relating to the Bible text are widely different as well. When discussing the six days of creation, Cosmas and Philoponus differ very much from each other in factual matter, but also in their way of presenting their understandings of Scripture, as my survey is likely to have shown. Cosmas is rather concise and his chapters are short. Philoponus spreads out and is very detailed. Partly, this is a difference of sheer bulk, for their treatments of the six days of creation vary considerably in length. Whereas this is the subject of Philoponus' work as a whole, Cosmas devotes less than thirty of his short chapters (III.12–40) to accounting for the successive stages of creation in the order in which they are presented in *Genesis*. But this quantitative difference should not conceal the fact that both writers deal with a great number of questions that are not taken up in *Genesis*, the difference being that Philoponus inserts those questions into the frame-work provided by the creation story, while Cosmas devotes their own chapters to many of those questions in other contexts.

The survey given here has exemplified how Philoponus, exploiting his philosophical and scientific training, is able to problematize different points in the creation story and to discuss what answers to the ensuing questions would be tenable from a scientific point of view. Cosmas on his side, even if he is not totally unfamiliar with Greek science, is alien to much of that strict scientific reasoning.

It is not difficult to see that Philoponus depends a great deal on Basil. He turns to him several times and quotes him literally now and then. But on one point in particular, Philoponus differs from Basil. Philoponus is keen on stressing knowledge and even sees knowledge as an essential prerequisite if you want to live a good and virtuous life to become 'in likeness' with God. Basil, on the other hand, stresses faith, and even if he not at all is hostile to knowledge—he was himself a learned man with years of studies behind him—he still stresses faith as the base for a Christian life and is eager to explain the story of creation in an easy way, intelligible to all.

In his exegesis of the story of creation Cosmas does not use many Bible passages and that is unusual for him. Thus, surprisingly enough, Cosmas is not

as close to the Bible text as he is elsewhere, or at least claims to be. Philoponus, on the other hand, supports himself on quite many Bible passages.

That Philoponus has taken great pain to ‘get his message out’ and keep the dogmas clean, seems to be clear. The Trinity is defended in connection with the creation of man in God’s image. In Cosmas’ description of the story of creation it seems to me as if he refutes the Gnostic belief in one good God and an evil demiurge.

Cosmas, the conscientious preacher, bursts out in a hymn of praise, when he describes man. Philoponus, whose ambitions are scientific rather than homiletic or liturgical in character, contents himself with explaining the text in a rather dry manner and, as we shall see later on, shows outbursts of emotion only when the intellectual capacities of his opponents prove themselves more than normally below standard.

4 Angels

This chapter will deal with angels and the importance that the two opponents, Cosmas and Philoponus, attach to these divine beings. In this context Philoponus very frequently turns to Theodore but, in view of their identical views on the angels, it is not unlikely that Theodore's name in most of the cases could be replaced by Cosmas'.

4.1 Views on the angels in general

What is an angel? Is an angel, as the Greek word ἄγγελος originally means, a messenger? It is true that angels in the young Church were considered to be messengers from God to men, but they certainly also had other functions.¹

The belief in angels was passed on to early Christianity from Judaism, and Dionysius Areopagita² arranges and classifies the angels into a hierarchy, but he also emphasizes certain angels' guardianship over the different peoples.³ The last book of the New Testament, John's *Apocalypse*, provides an example of angelic guardianship. Here the different angels are the representatives of the seven churches as well as the addressees of the letters to the congregations. Dionysius Areopagita declares already by the very name of his work, *De caelesti hierarchia*, that the angels have different ranks. They make hosts and armies but also choirs to serve God, their creator, in heaven which is their true

¹ The following survey of the beliefs about angels in the early church is mainly based on Johann Michl's article in *Reallexikon für Antike und Christentum* (Michl (1962)).

² Dionysius Areopagita is of course actually pseudo-Dionysius.

³ Cf. *De caelesti hierarchia* IX.2: "Therefore has the Bible attributed the same hierarchy that exists here among us to the angels, and appointed the angel named Michael to govern the Jewish people and other angels to govern other peoples." I have translated the word ἡ θεολογία with 'the Bible'. Lampe has the translations 'teaching about God' and 'teaching about the divinity'.

home. The angels are created immortal and they make a kind of royal household around God's throne. They only leave heaven on the order of God and, when they appear to men, they are, for the most part, seen as young men clothed in shining white garments.

In the theology of the young Church there is, however, a connection between the human world and world of angels. Angels are God's messengers and they participate in the liturgies of the Church especially at the baptism. According to Origen, they are present at Christian meetings. Every church on earth has got an angel appointed as its heavenly bishop. The angels are also closely connected to the stars.

There seems to be two different opinions prevalent in the early Church on the question *when* the angels were created. The one, which was adhered to by Origen, Basil, Gregory of Nazianzus, John Chrysostom, John Philoponus and many others, reckoned that the angels were created before everything else. The other opinion, held by Theodoret among others, was that the angels were created at the same time as everything else. A more precise opinion, viz., that the angels were created on the first day of creation, was held by Theodore of Mopuestia. However, the Bible does not say anything about the time for the creation of the angels.

The spirit of the angels is thought of as quite different from that of stars, humans, animals and plants. The substance, that the angels were made of, seems to have been a matter of interest and discussion. The angels were considered to consist of air and fire, still some other kind of air and fire than we find in the elements on earth. The substance they are made of was thought to be equipped with apprehension and capability for desire. The angels will always exist and will never dissolve. The angelic connection to air (wind) and fire is reflected in *Psalms* 103.4 (*LXX* version).

A problem for the young Church to handle was the question about the bodies of the angels. The angels are without body; *sine carne enim angeli sunt*, to quote one of the early church fathers.⁴ Clemens of Alexandria says that compared to the bodies that exist in the creation they are without body and shape (ἀσώματα καὶ ἀνεΐδεα) but compared to the Son of God they certainly are physical (σώματα μεμετρημένα καὶ αἰσθητά). They are without body compared to humans but still they have a body corresponding to their own nature. Because of the limitation that their bodies cause, the angels can be either in heaven or on earth but not in both places at the same time. The angels have been

⁴Irenaeus, *Adversus Haereses* 3.4.

likened to birds because of their ability to move very quickly from one place to another and they can be present everywhere.

The common conception both in the Bible and in late Judaism is that the angelic dwelling-place is in heaven, in the different rooms of heaven. The angels are citizens in heaven where Christ is king. But there is also another prevalent conception, viz. that the angels are in this world. The angels are everywhere, according to Basil, and Origen says that the whole world is full of them.

The angels have different tasks to perform in creation. We have already mentioned that they are messengers from God to men, but they had also great tasks to perform in cosmos. Angel-princes were thought to help, order and dominate different pieces of creation while God took care of the creation in whole. The angels were allotted their different tasks according to their merits before the creation of the world. There is a conception of an angel of the sun and an angel of the moon. There is also the conception that the stars are animated and equipped with free will. The thought that angels move the stars and the planets was also held by some, and as we will see it was Cosmas' firm conviction that the angels were entrusted with the task to move the stars.

It is notable that early Christian texts avoid employing the term angel when depicting Jesus. The reason for this is that it is important to emphasize Jesus' superiority and lordship over the angelic beings. There is also the fact to be taken into consideration that the New Testament itself is strikingly sparse in its mentioning of angels. Jesus Christ is in focus and, even if angels are mentioned, they are of subordinate significance. In the New Testament their role as servants is stressed. *Matthew* 4.1–11, which describes how Jesus was tempted by the devil in the desert, can serve as an example of this. After a rather long and detailed account of how Jesus managed to resist the temptations, the second part of verse 11 just states: "angels came forward and *served* him."⁵

4.2 Cosmas' and Philoponus' different views on the angels

4.2.1 Questions discussed

The very facts that the belief in angels did not have its upswing until the era of the church fathers and that the angelic doctrine does not have very much space in the Bible, bring about certain difficulties for both Cosmas and Philoponus

⁵ *Matth.* 4.11 καὶ ἰδοὺ ἄγγελοι προσῆλθον καὶ διηκόνουν αὐτῷ.

when they try to find passages in the Bible which can support their respective ideas about the angels. Philoponus, on his part, had the advantage of having a well thought-out scientific cosmology which still gave room for non-perceptible beings like the angels, while Cosmas, who did not have this advantage, had to fit the angels into his considerably more primitive conception of the world. Cosmas and Philoponus agree, however, about the very existence of angels but their agreement limits itself to this. Their opinions differ about *when* the angels actually were created and given existence, *what kind of substance* they are made of, what their *tasks* are and for what *purpose* they have come into being. Further, where is their *place of residence* situated? Are they limited to space or not? These questions float into each other but are still discernible, so let us first see how Philoponus and Cosmas have arranged their material about the angels in their respective works *De Opificio Mundi* and *Christian Topography*.

4.2.2 The arrangement of the material

4.2.2.1 Philoponus

Philoponus considered it convenient to gather his discussion about the angels in the first book of *De Opificio Mundi*,⁶ and in this way he has accomplished a fairly continuous account. The following description is based on the assumption that, when Philoponus mentions Theodore, he directs himself to his contemporary antagonist Cosmas as well and, perhaps, in the highest degree so.⁷ His discussion begins in I.8, with the controversial question *when* during the creation of the world the angels were created. He answers this question by help of the great church father Basil. In I.9 Philoponus brings forward the next controversial question and discusses, through the whole chapter, of *what substance* the angels are created. In this chapter he makes use of many Bible passages.⁸ In I.10 he refutes the thought that the angels came into existence at the *same time*

⁶ Philoponus also has a smaller exposition in VI.2, where he once again takes up the question which is discussed in detail in book I, namely, that the angels were not created on the first day of creation, together with heaven and earth. In VI.3–4 he makes the remark that the use of the plural in *Genesis* (“let us make...in our image”) bears no reference to God/Creator and the angels together but is uttered by God in his quality of triune God.

⁷ Cf. chapter 1.

⁸ Namely: *Psalms* 103.4, *John* 4.24, *Deut.* 4.24, *Matth.* 18.10, *Deut.* 32.8, *Dan.* 10.13, 20, *Josh.* 5.13, *Psalms* 102.20, *Luke* 1.18, *Luke* 1.26, *2Regn.* 24.15 (*2Sam.* 24.15), *4Regn.* 19.35 (*2Kings* 19.35), *Is.* 10.5, *Is.* 10.6, *Psalms* 33.8, *John* 20.12, *Gen.* 18, *Gen.* 32.24, *Dan.* 8.15, *Dan.* 10.5, *Ezek.* 10.14, *Is.* 6.2.

as bodies. He also denies that the human soul came into existence at the same time as the human body. In addition to support from Bible passages he fits in a line from the *Iliad* as well: “May you all become water and earth.”⁹ In the small chapter I.11 he continues the same discussion.¹⁰

In I.12 he attacks Theodore for bringing forward many doctrines which have no foundation in the Bible and among these doctrines we find the task, ascribed to the angels by Theodore, that the angels must keep the celestial bodies in movement. In this chapter (28.26–29.5) we can also trace Philoponus’ own ‘impetus theory’:¹¹ ἄρ’ οὐκ ἠδύνατο σελήνη καὶ ἡλίω καὶ τοῖς λοιποῖς ἄστροις ὁ δημιουργήσας αὐτοὺς θεὸς κινητικὴν ἐνθεῖναι δύναμιν, ὡς τοῖς βαρέσι τε καὶ κούφοις τὰς ῥοπὰς, ὡς τοῖς ζώοις ἅπανσι τὰς ἀπὸ ψυχῆς κινήσεις ἐνυπαρχούσης αὐτοῖς, ἵνα μὴ βία τούτους οἱ ἄγγελοι κινῶσιν;¹² In I.14 Philoponus brings in Theodore’s follower Theodoret, as a witness for his own opinion, namely, that the Bible is rather silent about the angels. Chapter I.15 is a kind of summary of the question about the angelic substance. In this chapter Philoponus also turns to *Job* 38.7¹³ when discussing the question whether the angels were created before or at the same time as the world. I.16 is a long chapter stretching from page 35 to page 40. Here Philoponus presents the doctrine that nothing that is incorporeal exists in a place. He also makes use of his doctrine and conviction that place, τόπος, is three-dimensional extension¹⁴ and that only bodies, because they are three-dimensional, can be in a place.¹⁵ He makes a new attack against Theodore’s doctrine that the angels were created together with heaven and earth. In this chapter Philoponus conducts an advanced philosophical line of argument which runs through the whole chapter.¹⁶ In I.17 he accuses Theodore of accepting a limitation only on the spatial level.

⁹ Bible passages used in I.10: *Job* 10.9, *Gen.* 3.19, *Gen.* 2.7, *Gen.* 1.24, *Psalms* 102.20, *Matth.* 18.10.

¹⁰ *Job* 40.14 is used here.

¹¹ For an explanation of Philoponus’ ‘impetus theory’ cf. Sorabji (1987) 7–13.

¹² In Reichardt’s text this sentence opens with ἄρ’ and there is a semi-colon after κινῶσιν. The sentence is obviously a (rhetorical) question. Therefore I have changed ἄρ’ into ἄρ’ and the semi-colon into a question-mark. Bible passages used in chapter 12: *Psalms* 109.1, *Hebr.* 8.1, *Gen.* 2.17, *Gen.* 3.7, *Gen.* 3.21.

¹³ *Job* 38.7: “When the stars came into being, all my angels praised me in a loud voice.”

¹⁴ Furley (1991) 28.

¹⁵ *Ibid.* 22.

¹⁶ In this long chapter only two Bible passages are used, *Dan.* 7.10 and *Rom.* 8.21.

In the long chapter I.18, stretching from page 43 to page 48 in Reichardt's edition, Philoponus once more aims at refuting the idea that the angels came into existence together with heaven and earth. In this chapter he cites no less than twenty-two Bible passages.¹⁷ It is a legitimate question to ask why Philoponus cites so many passages. An answer might be that he wants to stress strongly that, when he accuses his opponent of neglecting the deeper meaning behind the mere letter, this accusation is legitimate. Probably Philoponus is right here, as the Antiochene school is known to keep an attitude of reserve towards metaphors.¹⁸ In I.19 Philoponus puts the question "What is the meaning when *Psalms* 148.1 runs: 'Praise the Lord from the heavens'?" He expresses his fear that this passage could lead us astray and confuse us to believe that rational, incorporeal creatures are in a place just like physical bodies.¹⁹ In this chapter he also gives an exegesis of *Psalms* 133.2 "Stretch out your hands during the nights towards the holy things and pray to the Lord."²⁰ Philoponus claims that, when simple people stretch their hands in prayer, this action helps them to lift their minds (νοῦς) to God.

In 1.20 Philoponus refutes the belief, held by Theodore, that the works of God are mentioned in *Psalms* according to the order of their creation. He stresses that Moses has not mentioned anything about the creation of the intelligible and incorporeal powers (τῶν νοητῶν καὶ ἀσωμάτων δυνάμεων) but that the psalmist has started his poetry by mentioning the most worthy of all that a human can mention, the heaven.²¹ In the rather short chapter I.21 Philoponus makes use of as many as ten Bible passages.²² These passages seem to cause him trouble. He has not much more to say than what he says in 52.10–12, that the words in *I Corinthians* 4.9 do not contradict the fact that "the angels are no part of the perceptible world, nor have they been created together with it."²³

¹⁷ *Psalms* 148.1, 2, 7, *1Cor.* 4.9, *Psalms* 2.4, *Psalms* 113.24, *Psalms* 112.5, *Psalms* 13.2, *Psalms* 143.5, *Is.* 66.1, *Acts* 7.49, *Dan.* 7.9, *Psalms* 94.4, *Is.* 40.12, *2Cor.* 6.16, *John* 14.23, *1Cor.* 3.16, *Is.* 57.15, *Is.* 59.2, *Solomon's Wisdom* 1.4, 5, *Is.* 7.13, *Is.* 57.15.

¹⁸ In Eastern exegesis of the 4th and 5th centuries the emergence of the so-called Antiochene school with a programme antagonistic to the allegorising exegesis of the Alexandrian school is of fundamental importance. See Simonetti (1994) 59.

¹⁹ μὴ τοῦτο ἡμᾶς εἰς ἐκτόπους φαντασίας ἐξαγέτω περὶ τῶν νοερῶν καὶ ἀσωμάτων δυνάμεων, ὅτι τε ἐν τόπῳ εἰσὶν ὡς τὰ σώματα.

²⁰ ἐν ταῖς νυξὶν ἐπάρατε τὰς χεῖρας ὑμῶν εἰς τὰ ἅγια, καὶ εὐλογεῖτε τὸν κύριον.

²¹ In I.20, Philoponus makes use of *Psalms* 148.1–4, 7–8 and *Dan.* 3.63–64.

²² *1Cor.* 4.9, *Eph.* 6.12, *1John* 5.19, *John* 15.19, *John* 14.30, *Psalms* 77.49, *Matth.* 25.41, *2Peter* 2.4, *Jude* 6, *1Cor.* 6.3.

²³ οὐχ ὡς τῶν ἀγγέλων μέρος ὄντων τοῦ αἰσθητοῦ κόσμου ἢ συγγενομένων αὐτῷ.

Philoponus ends this chapter by stating that it is not our business, nor is it necessary, to occupy ourselves with the angels. I.22 is a long chapter stretching from 53.17 to 59.2. Here Philoponus makes a violent attack on Theodore's exegesis of *Genesis* 1.3. Philoponus makes this exegesis appear mere madness. In this chapter he also stresses that, even if the angels are incorporeal and intelligible, they have no share in human sense organs.²⁴

4.2.2.2 *Cosmas*

We leave *De Opificio Mundi* for a while and turn to *Christian Topography*. We can note at once that Cosmas' description of the angels is not kept together. Cosmas has preferred to spread his thoughts about the angels in several books of the *Topography*, viz., I, II, III, IV, V, VII, IX and X.

In I.30–32 Cosmas claims that the angels are part of this universe and dwell here below the firmament. The belief that the angels reside in this world below the firmament is the theme also in V.245–247 as well as in VII.48, 51–54, 57–59 and 88. The angels exist and serve in this world, although there are certain people who believe that the angels have their abode in heaven.²⁵ Twenty-three Bible passages have been used here.²⁶ In II.101 Cosmas states that God created heaven and earth on the first day of creation. On the first day he also created the darkness, the water, the air, the fire mingled with the earth and *the angels*. In III.13 Cosmas says much the same thing, and in III.28–29 he claims that God brought the angels into existence at the same time as heaven and earth. Further, he says that the angels did not exist *before* and that they were aware of this fact. Three Bible passages have been used.²⁷ In II.108 Cosmas claims that the Scriptures teach us that both angels, demons and souls are limited and that they dwell in this world. He also points out that God alone is unlimited. He uses three Bible passages.²⁸

²⁴ Bible passages used in this chapter are: *Matth.* 3.17, *1Cor.* 13.1, *Gal.* 1.8, *Rom.* 8.38, *Psalms* 102.20, *Hebr.* 1.14, *2Cor.* 11.14, *Matth.* 8.3, 13, *Psalms* 148.5, *Psalms* 138.6, *Matth.* 18.10, *1Cor.* 13.12, *Matth.* 5.8, *1John* 3.2–3, *Rom.* 1.20–21.

²⁵ τινὲς δὲ λέγουσι μὴ εἶναι ἐν τῷ κόσμῳ τούτῳ τοὺς ἀγγέλους, ἀλλ' ἐν τῷ ἀνωτέρῳ καὶ οὐρανίῳ χώρῳ (VII.48).

²⁶ *Rom.* 1.22, *Rom.* 1.23, *2Tim.* 3.5, *1Cor.* 4.9, *Psalms* 148.1–3, *Psalms* 148.4, *Dan.* 3.59–60, *Psalms* 103.2–3, *Psalms* 103.4, *John* 3.13, *Hebr.* 6.20, *John* 3.13, *1Cor.* 4.9, *Hebr.* 1.14, *Eph.* 3.10, *Gen.* 28.12, *Gen.* 21.17–18, *Gen.* 18.1–11, *Gen.* 19.1, *Deut.* 32.43, *Psalms* 148.1–4, *Psalms* 148.3, 4.

²⁷ *Gen.* 1.5, *Gen.* 1.3, *Job* 38.7.

²⁸ *1Cor.* 4.9, *Dan.* 10.13–14, *Psalms* 138.8–10.

In III.13 Cosmas tells us how Moses was taken by God to Mount Sinai to be instructed how God worked during the six days of creation. The angels were created on the first day together with heaven and earth; no Bible passage here. In III.28–29 we are told that the angels, who did not exist before (οὐπὼ τὸ πρότερον ὄντας), came into being on the first day of creation and then were instructed when God continued to create. Three Bible passages are used.²⁹ In III.30, 31, 32, 36–38, 39, 40–42, 48, and 49 we are told *how* the angels were instructed by the creation. Four passages are used.³⁰ In III.33 Cosmas speaks of the fall of certain angels. He tells us how these angels were ungrateful to God, became arrogant and revolted against God; no Bible passage here. In III.42 he stresses again that the angels were created at the same time as heaven and earth. He uses *Genesis* I.1 and explains that the angels had to be created on the first day of creation in order to assist God and to be instructed when everything else came into existence. He mentions the same thing again in X.39, where he puts forward Severian of Gabala as a witness. In VII.55 he claims that it is obvious that the angels dwell within heaven and earth and are limited by the universe. Three passages are used.³¹ In IX.16, 17, 19 it is repeated that the angels dwell in this world, and in IX.16 Cosmas also mentions that the angels serve the humans in a special way by putting the stars into movement.³² This thought was sneered at by Philoponus.

In IX.19 one Bible passage is used.³³ In X.16 Cosmas takes Gregory of Nazianzus as support and witness for his conviction that the angels dwell in this world. In X.39 Cosmas comments on a letter by Severian. He turns to ‘those who like quarrels’ (οἱ τῆς φιλονεικίας φίλοι)³⁴ and shows forth how well Severian’s doctrines agree with his own. Here he once again stresses that the angels were created at the same time as heaven and earth and he adds that they were spectators to the remaining creation.

In II.84–86 we learn that some angels have the duty to move the air, others to move the sun. Some have the duty to move the moon, others again to move the stars. Some angels must produce clouds, others rain and all kinds of such things. All they do, they do for the benefit of man. Still, they wait together with man

²⁹ *Gen.* 1.5, *Gen.* 1.3, *Job* 38.7.

³⁰ *Luke* 15.7, *Gen.* 1.1, *Gen.* 2.23, *Gen.* 2.18.

³¹ *Psalms* 148. 5–6, *Psalms* 148.13, *Ex.* 20.11.

³² αἱ ἀόρατοι Δυνάμεις διακονοῦσαι τῷ θεῷ προστάγματι διὰ τοὺς ἀνθρώπους κινοῦσι τὰ ἄστρα ἀκαταπαύστως καὶ ἀνεκδότης νυκτὸς καὶ ἡμέρας.

³³ *Hebr.* 1.14.

³⁴ Most probably referring to Philoponus.

for the day of liberation. In other words, they are bound to man in a way. Here Cosmas supports himself on *Romans* 8.19–21.³⁵ In II.89–90 Cosmas continues the thought that there is a bond between man and angels, and he speaks of the grief of the angels over the Fall of Man. But when Christ was born, the bond between man and angels was restored, much to the joy of the angels. Two Bible passages are used here.³⁶ In II.91–93 Cosmas makes a summary of the Passion and describes the joy of the angels at the Resurrection. Here he makes use of four passages.³⁷ In III.26–27 we are told that, on the fourth day of creation, the angels received their task to become servants of man and they also got to know that they *too* were under the law. Three passages are used.³⁸ In III.35 Cosmas speaks of the great task of the angels to keep the nature in order. Sun, moon, stars and not least the air must be moved in order to function to the benefit of man. No Bible passage is used in this section. In V.73–74 Cosmas speaks of the despair of the angels, when man fell in sin and was punished with the penalty of death. The angels lost hope for man, for themselves and for the universe. When the angels saw, however, that God cared about man again and sent Christ, they regained their hope. They also got to know more about the wisdom of God through the Church. Three Bible passages are used.³⁹

In VII.48–52 Cosmas refutes those who claim that the angels do not dwell in this world but in a superior, celestial world. The angels are here on earth and they *are limited* to be here in order to serve man. No less than twelve Bible passages are used in this section.⁴⁰ In VII.61 Cosmas says that the angels hope that they too will become liberated and get access to the superior world which is prepared for man by God. Two Bible passages are used.⁴¹ In IX.13 Cosmas intends to give evidence that the celestial bodies are moved by angels. When the Day of Christ arrives, the angels will be liberated from their service. Then the stars will fall down on the earth. Two Bible passages are used.⁴²

This survey shows that the question *when* the angels were created is important to the two opponents, not to say the most important question, and it will be our first target for closer investigation. This particular question, as I see

³⁵ Ἡ γὰρ ἀποκαταδοκία τῆς κτίσεως τὴν ἀποκάλυψιν τῶν υἱῶν τοῦ θεοῦ ἀπεκδέχεται.

³⁶ *Luke* 2.14, *Matth.* 4.1–11.

³⁷ *John* 16.33, *Luke* 10.19, *Gen.* 3.15, *Col.* 2.14.

³⁸ *Luke* 10.18, *1Tim.* 3.16, *Gen.* 3.3.

³⁹ *Luke* 15.7, *Rom.* 8.20–22, *Eph.* 3.10.

⁴⁰ *John* 3.13, *1Cor.* 4.9, *Rom.* 8.19, *Rom.* 8.20, *Rom.* 8.21, *Hebr.* 1.14, *Eph.* 3.10, *Gen.* 28.12, *Gen.* 32.3, *Gen.* 21.17–18, *Gen.* 18.1–11, *Gen.* 19.1.

⁴¹ *1Peter* 1.12, *Rom.* 8.22.

⁴² *Rom.* 8.20–21, *Matth.* 24.29.

it, must have its origin in the two opponents' outlook. Philoponus sees the angels as purely spiritual beings, *servants of God* and belonging to heaven. Cosmas, on his part, sees the angels as *servants of men*, albeit on the order of God, with their principal sphere of activities on the earth. These absolutely opposite views make a great difference between the two opponents' approach to the angels right from the start.

4.3 When were the angels created?

4.3.1 Cosmas' view

In *The Christian Topography* III.28 Cosmas is rather detailed. First he states that the angels were created on the first day of the creation together with heaven and earth.⁴³ Secondly he states that the angels are intelligent creatures and that they were struck dumb with amazement when they found themselves alive and existing together with heaven and earth. Therefore they immediately started to reflect on who was their creator. According to Cosmas, the angels were aware that they existed *within* what was created at the same time as themselves, namely, heaven and earth. They were also aware that they had not existed before (ἐθεώρουν γὰρ ἑαυτοὺς τούτων ἔνδον ὄντας καὶ οὐ προϋπάρχοντας). They kept asking themselves, however, whether their creator was the same one who also had made heaven and earth. While still pondering over this, God's voice was heard "let there be light",⁴⁴ and the angels were taught that the same creator, who had made the light come forth out of nothing, had also created them.

⁴³ Cosmas was neither the only one nor the first one who was of the opinion that the angels were created on the first day of creation together with heaven and earth. Theodore of Mopsuestia was of the same opinion. The same idea, however, is accounted for also in the *Book of Jubilees* from the first century A.D. Cf. Testuz (1965) 75: "Le premier jour, Il créa les cieux qui sont en haut, et la terre, et les eaux, et tous les esprits qui font leur service devant Lui : les Anges de la Face, et les Anges de la Sainteté, et les anges de l'esprit du feu, et les anges de l'esprit des vents, et les anges de l'esprit des nuages, et de l'obscurité, et de la neige, et de la grêle, et du gel, et les anges des voix, et du tonnerre, et de l'éclair, et les anges des esprits du froid, et de la chaleur, et de l'hiver, et du printemps, et de l'automne, et de l'été, et de tous les esprits de ses créatures qui sont dans les cieux et sur la terre..."

⁴⁴ *Gen.* 1.3.

4.3.2 Philoponus' refutation of Cosmas

4.3.2.1 Arguments from Basil against Theodore

In *De Opificio Mundi* I.11, 27.21–28.16 Philoponus refers to a point of disagreement between Basil and Theodore. Theodore's had claimed that the angels were created simultaneously with the material world (τοῖς σώμασι), Basil that their creation was independent of matter. Philoponus suggests that Theodore might denounce Basil by declaring his belief to be 'unwritten', i.e., to lack support in Scripture. In fact it is not at all unwritten (οὐδὲ παντελῶς ἔστιν ἄγραφον), Philoponus declares. In *Job*, he continues, it was said about the devil, who from the beginning was among the angelic host: "this one is the beginning of God's creation, made to be scoffed at by the holy angels."⁴⁵ Philoponus asks the questions *how* the devil could be the beginning of the things created by God if he came into being together with the world, and *how* heaven and earth could be the beginning if Job says that the devil was the beginning. It is therefore evident, according to Philoponus, that heaven and earth is the beginning of the visible world and the devil is the beginning of the invisible world. The creation of the invisible world, however, is not mentioned by Moses and nothing is written in the Bible that could support Theodore's belief.

At the end of this chapter Philoponus states that there are many dogmas which, although held by the Church, are not written in the Bible. He mentions such doctrines as the Divine being incorporeal, without shape, without extension and therefore also indivisible (τὸ ἀσώματον εἶναι τὸ θεῖον, τὸ ἀσχημάτιστον, τὸ ἀδιάστατον, διὸ καὶ ἀμερὲς ὑπάρχει). In this connection Philoponus also mentions the doctrine that was of great importance in his days, namely, that the Holy Trinity—Father, Son and Holy Spirit—are of the same substance (τὸ ὁμοούσιον εἶναι τὴν ἁγίαν τριάδα). Further, the doctrine that the bodies are made of the four elements (τὸ ἐκ τῶν τεσσάρων στοιχείων εἶναι τὰ σύνθετα σώματα). These doctrines and many more are not written in the Bible. Still they are conclusions arrived at by reasoning from accepted concepts, gathered in the Church and nourished there, and Philoponus stresses that Theodore ought to have been aware of that fact.

4.3.2.2 Arguments from Theodoret

In I.14, 33.11–25 we find another of the very few occasions when Philoponus brings in a church father into his argumentation. Philoponus takes Theodoret of

⁴⁵ *Job* 40.19 τοῦτό ἐστιν ἀρχὴ πλάσματος κυρίου, πεποιημένον καταπαίζεσθαι ὑπὸ τῶν ἀγγέλων αὐτοῦ. Philoponus quotes the last phrase as ὑπὸ τῶν ἁγίων ἀγγέλων.

Cyrrhus⁴⁶ as an example of the weak argumentation of Theodore’s doctrine. First he tells us that Theodoret earlier has made use of all Theodore’s attacks by which the latter believed himself to prove that the angels did not exist before the world. But later, Theodoret modified his views and Philoponus cites: “I do not assert this categorically – because I think that it is adventurous to speak categorically about things that the Bible does not speak clearly of – but I stated what I have understood to be in accordance with pious reasoning. This is *right* to know, however, that all beings, except the Holy Trinity, possess a nature which is created. If this is agreed upon, it will not hurt the thought of piety to say that the hosts of angels were created *before* heaven and earth.”⁴⁷

It must have been something of a triumph to Philoponus when he found the statement just cited in Theodoret’s work, and from his citing it conscientiously we can understand that Philoponus really makes the most of it. We have noticed that he never uses Cosmas’ name when he makes his rejections of the Antiochene fraction of the Church and its perhaps most famous representative Theodore of Mopsuestia. But Theodore was dead since about a hundred years and could not be hurt by Theodoret’s doubts about the great importance of the time when the angels came into existence. Cosmas, though, if he now held Philoponus’ citations to be true ones, must have been at least frustrated when he considered that one of ‘his own’ belittled a doctrine which had extremely great importance for his understanding of the course of creation.

4.3.3 Angels not created on the first day of creation

4.3.3.1 Lack of scriptural evidence for Theodore’s view

In *De Opificio Mundi* I.8, 16.19–17.17 John Philoponus strongly refutes the thought, held by Theodore, that the angels were created on the first day of creation. As a support for this his opinion he refers to Basil who claimed that there had been a state *before* the creation of the world, a state adapted to the

⁴⁶ Theodoret (c. 393–c. 466), bishop of Cyrrhus, was an adherent of the Antiochene fraction of the Church.

⁴⁷ ἐγὼ δὲ ταῦτα οὐκ ἀποφαινόμενος λέγω — τολμηρὸν γὰρ ἀποφαντικῶς οἶμαι λέγειν, περὶ ὧν ἡ θεία διαρρήδην οὐ λέγει γραφή — ἀλλ’ ὅπερ τοῖς εὐσεβέσι λογισμοῖς ἀρμόττειν ὑπέλαβον, εἶρηκα. ἐκεῖνο μέντοι δίκαιον εἰδέναι, ὡς ἅπαντα τὰ ὄντα πλὴν τῆς ἁγίας τριάδος κτιστῆν ἔχει τὴν φύσιν. συνομολογουμένου δὲ τούτου τῷ τῆς εὐσεβείας οὐ λυμαίνεται λόγῳ τὸ πρὸ οὐρανοῦ καὶ γῆς γεγενῆσθαι λέγειν τῶν ἀγγέλων τοὺς δῆμους. I have cited from Philoponus’ text. In Theodoret’s own text the word ‘necessary’ (ἀναγκαῖον) is used instead of the underlined word ‘right’ (δίκαιον).

supra-mundane (ὑπερκοσμίοις) and rational (νοεραῖς) powers, in other words, angels. Basil says in *Hexaemeron* I.5:⁴⁸ “It seems that even before this world was created, there existed something which is possible to consider in our mind. This has not been described, however, since it is a subject too advanced to beginners, who are like children when it comes to knowledge. There existed before the creation of the world a state, which was in accordance with the supra-mundane powers, a state beyond time, eternal and everlasting. In this very state, the creator of the universe has created his work, a spiritual light befitting the blessedness of those who love the Lord, rational (λογικάς), invisible (ἀοράτους) natures and the whole host of the spiritual (νοητῶν),⁴⁹ beings beyond our understanding, who we cannot even mention by name. This fills the substance of the invisible world as Paul teaches us when he says: “In him everything was created, visible and invisible, thrones and dominations, rulers and authorities, powers and the hosts of angels under the command of archangels.”⁵⁰ Philoponus also stresses that, when Moses claims that God created heaven and earth in the beginning, this does not mean that the world is older than everything else which is created in the universe, but simply declares, that the perceptible, touchable things in the world did not come into being until *after* the invisible, rational ones first had come into existence.

In order to stress his own conviction that the angels already existed when the visible world was created, Philoponus accuses Theodore of insulting the memory of Basil, the great authority of the ancient Church.

In I.8, 17.11–17 Philoponus cites Theodore who had uttered that it was silly of men, who claimed to follow the Scriptures, to maintain that angels and

⁴⁸ Ἦν γάρ τι, ὡς ἔοικε, καὶ πρὸ τοῦ κόσμου τούτου, ὃ τῆ μὲν διανοίᾳ ἡμῶν ἐστι θεωρητόν, ἀμιστόρητον δὲ κατελείφθη διὰ τὸ τοῖς εἰσαγομένοις ἔτι καὶ νηπίοις κατὰ τὴν γνῶσιν ἀνεπιτήδειον. Ἦν τις πρεσβυτέρα τῆς τοῦ κόσμου γενέσεως κατάστασις ταῖς ὑπερκοσμίοις δυνάμεσι πρέπουσα, ἡ ὑπέρχρονος, ἡ αἰωνία, ἡ αἴδιος. Δημιουργήματα δὲ ἐν αὐτῇ ὁ τῶν ὅλων κτίστης καὶ δημιουργὸς ἀπετέλεσε, φῶς νοητὸν πρέπον τῇ μακαριότητι τῶν φιλοῦντων τὸν κύριον, τὰς λογικάς καὶ ἀοράτους φύσεις καὶ πᾶσαν τὴν τῶν νοητῶν διακόσμησιν, ὅσα τὴν ἡμετέραν διάνοιαν ὑπερβαίνει, ὧν οὐδὲ τὰς ὀνομασίας ἐξευρεῖν δυνατόν. Ταῦτα τοῦ ἀοράτου κόσμου συμπληροῖ τὴν οὐσίαν, ὡς διδάσκει ἡμᾶς ὁ Παῦλος λέγων· “Ὅτι ἐν αὐτῷ ἐκτίσθη τὰ πάντα, εἴτε ὀρατὰ εἴτε ἀόρατα εἴτε θρόνοι εἴτε κυριότητες εἴτε ἀρχαὶ εἴτε ἐξουσίαι, εἴτε δυνάμεις, εἴτε ἀγγέλων στρατιαί, εἴτε ἀρχαγγέλων ἐπιστasiaί. I cite this little passage in its whole in order to show that Philoponus had solid ground for his feet when he turns to Basil.

⁴⁹ νοητῶν should perhaps be translated ‘perceptible to our mind’.

⁵⁰ *Col.* 1.16.

invisible powers were created before the visible creation.⁵¹ Theodore himself and Cosmas in his footsteps claimed that nothing whatsoever existed before the perceptible bodies and that the angels were created together with heaven and earth.

This opinion was a source of irritation to Philoponus, so in I.8, 18.13–14 he demands from Theodore that he must show exactly where the Bible gives expression to the thought that the angels were created together with heaven and earth. *Genesis* 1.1 is the Bible passage which states that God created heaven and earth. There is no addition to this verse which claims that God, at the same time, created other things belonging to heaven and earth. Still Cosmas claims that the angels must have been created at the same time.

In *Topography* III.42 Cosmas stresses that those who want to know whether the angels really were created together with heaven and earth only need to consider the fact that it was only *after* their creation that God made use of voice when he performed the act of creation. He did not make use of voice when he brought forth heaven and earth, but when the angels were there he had to use the voice for their benefit. Cosmas' exegesis obviously presupposes that the angels were present when God continued to create and that God made use of voice when he created all other things in order to instruct the angels. It does not say in *Genesis* 1.1 "Let there be heaven and earth", for the angels were not yet there to hear it but, when God continued to create, he said "Let there be light", etc.

Philoponus, on his part, stresses the fact that Moses has not said one word about God creating the angels. Moses has told the story of the creation of this visible, physical world and he has done so in order to bring mankind to knowledge about the creator (I.8, 18.16–18).

In *Topography* III.41 Cosmas makes a summary of what he has said before about the creation. He then suggests that someone might put the question, *why* it took God six whole days to create the world. He answers the question himself by pointing out that, since the angels are equipped with intelligence but submitted to change, less than six days would not have been enough to teach them. The result of less than six days of creation might have entailed that they had jumped to the false conclusion that the world and everything within it was

⁵¹ This passage probably comes from Theodore's *Commentary on Genesis* which Philoponus obviously had at hand. For other attestations of that work, see *Clavis Patrum Graecorum* 345. The quotation in question runs: Εὐηθες δὲ οὐχ ἦττον, ὅταν καὶ τῶν εὐσεβῶν ἐπαγγελλομένων καὶ ταῖς θεαῖς πείθεσθαι προσποιουμένων γραφαῖς ἀγγέλους ἢ τινὰς ἀοράτους δυνάμεις εἶναι πρὸ τῶν ὀρωμένων νομίζωσιν εἶναι, οἱ μηδεμίαν ἐκ τῆς θείας γραφῆς ἀπόδειξιν παρασχέσθαι τούτου δυνάμενοι.

created at random and disorderly like a kind of creation of the imagination (φάσματα). Cosmas repeats that God brought forth the angels on the very first day together with heaven and earth. Thereafter, God continued to create the whole world, piece by piece, in six days for the angels to examine it and to be instructed.

It might seem surprising that Cosmas, who wants to read the Bible to the letter, adds such a thing as the creation of the angels being synchronous with that of heaven and earth. There is not even a hint of such an event in the description of the creation in *Genesis*, a fact which Philoponus is not slow to point out. It is a fact, however, that the doctrine, which claims that the angels were created at the same time as heaven and earth, is supported by the Antiochene fraction of the Church.

4.3.3.2 *An absurdity in Theodore's and his follower Cosmas' theology*

Philoponus, the scientist, who wanted to keep to clear facts, took offence at several 'peculiarities' in Theodore's theology. Such a peculiarity, which is connected to the question *when* God created the angels, is Cosmas' explanation as of why God made use of voice when he continued his creation after the first day.

Philoponus takes up Cosmas' explanation and makes an attack on Theodore when in *De Opificio Mundi* I.22, 53.22–56.3 he feels called upon to draw attention to this absurdity in Theodore's theology. This theology teaches among other absurd dogmas, according to Philoponus, that heaven and earth were created out of God's pure will without God using a voice when they were created. But after that, when the rest of the creation came into being, God actually spoke in order to instruct the angels. It is madness to believe such a thing, according Philoponus, and, if now Cosmas from time to time accuses the 'pretended Christians' of blasphemous thoughts, it is quite obvious here that Philoponus pays back when he says: "What madness! He hears an utterance from God that is articulate!"⁵² For Theodore does not speak of a voice that was heard, Philoponus points out, but of God himself speaking. If there had been only a voice, Theodore might have meant that the air formed itself into speech in a miraculous way, as it happened on several occasions, e.g. when Christ was baptized and a voice from heaven was heard. But since Theodore claims that God actually spoke, he must think that God is equipped with organs of speech like windpipe, tongue, palate, teeth and all the rest that makes it possible for

⁵² φεῦ τῆς ἀτοπίας· φωνὴν ἀκούει θεοῦ τὴν ἔναρθρον.

humans to speak. It also must mean that the angels are equipped with bodily hearing organs. Philoponus does not think it impossible that Theodore might make use of the Bible passage “if I speak with tongues of men and angels”,⁵³ not knowing that this figure of speech is a hyperbole. That was repulsive and irreverent in Philoponus’ eyes. If the angels are incorporeal and intelligent they have no share in our human sense organs.⁵⁴ They simply do not *need* sense organs to have knowledge about God and his work. They can see God all the time⁵⁵ with their spiritual eyes, and besides, they are superior to humans. Philoponus also accuses Theodore of believing the angels to be inferior to humans regarding the reason (Τοσοῦτο καὶ τῆς τῶν ἀνθρώπων αὐτοὺς ὑφείσθαι διανοίας ἠγείται).

The above mentioned attack of Philoponus’ against his antagonist leads us to another point of dispute, viz., of what substance the angels are made.

4.4 What substance are angels made of?

4.4.1 The different views of the opponents

In I.10, 23.21–27.17 Philoponus speaks about the creation of man and he cites from *Job*, “Do consider, Lord, that you have made me out of clay and that you will bring me back into clay”,⁵⁶ and from *Genesis*, “From earth you are and to earth you must return.”⁵⁷ He also cites from Homer: “May all of you become water and earth.”⁵⁸ By these quotations Philoponus wants to show that there is indeed a difference between body and soul as regards the substance. When man’s body already was created, “God blew the spirit of life into him and man became a living soul.”⁵⁹ This is not the case with the animals; they were given their bodies and their souls at the same time when they were created. The human soul was the last thing created; it is worth much more than the human

⁵³ *ICor.* 13.1.

⁵⁴ εἰ οὖν ἀσώματος καὶ νοερά τῶν ταγμάτων ἐκείνων ἐστὶν ἡ οὐσία, οὐδὲν τῶν ἡμετέρων ἔχουσιν αἰσθητηρίων.

⁵⁵ Cf. *Matth.* 18.10 οἱ ἄγγελοι αὐτῶν διὰ παντὸς βλέπουσι τὸ πρόσωπον τοῦ πατρὸς μου τοῦ ἐν οὐρανοῖς.

⁵⁶ *Job* 10.9.

⁵⁷ *Gen.* 3.19.

⁵⁸ *Iliad* 7.99 ἀλλ’ ὑμεῖς μὲν πάντες ὕδωρ καὶ γαῖα γένοισθε.

⁵⁹ *Gen.* 2.7.

body and much more than the souls of the animals. If this is so, then the angels must be worth still more, for they were created before the rest of the creation. After all they always contemplate the face of God,⁶⁰ and Philoponus continues by stating that they must, by far, be superior to every corporeal and corruptible nature. Accordingly, it is nonsense to think that they were created together with body as if they were composed of the same substance as body. Not even the human soul was brought into existence together with its own body. Besides, had they been created together with heaven and earth, why should not Moses have mentioned them? After all he has mentioned every kind of animal and even the smallest herb, so it would have been shameful if he had forgotten to mention the angels. Philoponus ends this chapter by stating that God must have created the angels *before* he created heaven and earth. Moses has not mentioned them because his one and sole intention was to teach about this visible world in order to bring knowledge about God to mankind. For this is the very reason why he has not left out one of the smallest things in the creation when it comes to the things within the world. If the angels have had their share in the creation of this world, Moses surely would have thought of them.

Let us now pass on to examine how Philoponus and Cosmas, respectively, deal with *Psalms* 148, a psalm which has much to say about angels, but also several other Bible passages, when they want to demonstrate their views.

In I.18, 43.24–48.10 Philoponus massively attacks Theodore’s literalism, a feature that is highly characteristic of Cosmas’ way of thinking. To this end *Psalms* 148 is put in focus. Cosmas, actually, cites from this psalm in *Topography* VII.53–55 and makes an exegesis there which very much resembles Theodore’s exegesis as it is described by Philoponus in *De Opificio Mundi* I.18, 43.24–44.20. Philoponus cites Theodore who, in his turn, cites from the psalm: “Praise the Lord from the heavens, praise him all his angels, praise him all his powers.”⁶¹ As David mentions the heaven first of all and includes the angels and the powers together with it and then adds: “Praise the Lord from the earth”,⁶² it is obvious that he followed the example of Moses, according to Theodore. These verses show that he divided the whole of the creation into these two parts, saying that the one part was to praise the Lord from the heaven and the other part from the earth. Theodore seems to mean that Moses made this very division, since he mentioned all that came into being *together* with heaven and earth and all that which came into being after. From this Theodore, much to

⁶⁰ *Matth.* 18.10.

⁶¹ *Psalms* 148.1–2.

⁶² *Psalms* 148.7.

Philoponus' indignation, concluded that Moses *could* make this division because he knew for certain that the angels had not been created *before* heaven and earth, but got their existence *together* with heaven and earth. In Theodore's as well as Cosmas' eyes, the angels are part of the creation and therefore have their abode within heaven and earth.

Cosmas comments on *Psalms* 148 in *Topography* VII.53–54 under the heading of 'The hierarchy of creation' and in VII.55 under the heading of 'Heaven and earth containing everything including the angels.' Cosmas states that king David, in the same way as Moses, distinguishes what belongs to heaven from what belongs to earth. In his psalm 'of praising', king David therefore begins in heaven and passes on downwards to the earth (ἀκολουθῶς ἀπὸ τοῦ στερεώματος καὶ τοῦ ὕψους ἀρξάμενος καὶ προϊῶν ἐπὶ τὰ κάτω). Cosmas' exegesis ends with the statement that the angels exist within heaven and earth and are circumscribed by the universe.

Doubtless, there are close points of similarity between Theodore's exegesis, cited by Philoponus, and that of Cosmas. This fact adds more credibility to the assumption that Cosmas depends on Theodore and is his true adept. The likeness between the two exegeses is shown by the underlined words and phrases in the text below.

De Opificio Mundi 1.18, 43.24– 44.20

Ἦσπερ, φησί, Μωϋσῆς εἰς δύο διείλε τὴν κτίσιν, οὐρανὸν καὶ γῆν, οὕτω καὶ Δαυὶδ εἰς τὰ αὐτὰ διείλεν αὐτὴν καὶ τὰ μὲν ἐκ τῶν οὐρανῶν, τὰ δὲ ἐκ τῆς γῆς ἔφησεν ὑμνεῖν τὸν θεὸν ἀκολουθῶς τῷ τὴν κτίσιν διηγησαμένῳ· πρότερον γὰρ τῶν ἐκ τῶν οὐρανῶν ποιησάμενος τὴν μνήμην· ἄινεῖτε τὸν κύριον ἐκ τῶν οὐρανῶν· ἐπάγει· ἄινεῖτε αὐτὸν πάντες οἱ ἄγγελοι αὐτοῦ, αἰνεῖτε αὐτὸν πᾶσαι αἱ δυνάμεις αὐτοῦ· περιληπτικῶς πᾶσας τὰς ἀοράτους καὶ λογικὰς φύσεις εἰπὼν· εἶτα ἐκ τῶν ἀοράτων ἐπὶ τὰ ὀρώμενα μεταβάς — ἡλίου μέμνηται καὶ σελήνης ἀστέρων τε καὶ φωτὸς οὐρανῶν τε καὶ αὐτῶν καὶ δὴ καὶ τῶν ὑπὲρ τὸν φαινόμενον τοῦτον οὐρανὸν ὑδάτων — ἐπάγει λοιπὸν· ἄινεῖτε τὸν κύριον ἐκ τῆς γῆς· εὐδηλον

Christian Topography VII.53–55

ὁμοίως καὶ ὁ Δαυὶδ τῷ σκοπῷ Μωϋσέως ἀκολουθῶν καὶ αὐτὸς μετὰ τὸν Μωϋσέα γενόμενος προφήτης, διαιρῶν τὰ τε ἐν τοῖς οὐρανοῖς καὶ τὰ ἐπὶ τῆς γῆς, οὕτω φησὶν· ἄινεῖτε τὸν κύριον ἐκ τῶν οὐρανῶν, αἰνεῖτε αὐτὸν ἐν τοῖς ὑψίστοις· αἰνεῖτε αὐτόν, πάντες οἱ ἄγγελοι αὐτοῦ· αἰνεῖτε αὐτόν, πᾶσαι αἱ δυνάμεις αὐτοῦ· ἀκολουθῶς ἀπὸ τοῦ στερεώματος καὶ τοῦ ὕψους ἀρξάμενος καὶ προϊῶν ἐπὶ τὰ κάτω, εἶπε πάντας τοὺς ἀγγέλους, τοὺς αὐτοὺς εἰπὼν καὶ δυνάμεις. λοιπὸν πάλιν τὰ ἅμα αὐτοῖς λέγει· ἄινεῖτε αὐτόν, ἥλιος καὶ σελήνη· αἰνεῖτε αὐτόν, πάντα τὰ ἄστρο καὶ τὸ φῶς· ἐκ τούτου ἀνατρέχει εἰς τὸν ἀνώτερον χῶρον καὶ φησιν· ἄινεῖτε αὐτόν, οἱ οὐανοὶ τῶν οὐρανῶν· ἀντὶ τοῦ εἰπεῖν ὁ οὐρανὸς τοῦ οὐρανοῦ· οὐρανὸν

τοίνυν ὡς ἅπασαν τὴν κτίσιν εἰς δύο
ταῦτα διελθὼν καὶ τὰ μὲν ἐξ οὐρανοῦ τὰ δὲ
ἐκ τῆς γῆς εἰρηκῶς, πάντα δὲ εἰπὼν ὧν τὰ
μὲν σὺν οὐρανῷ καὶ γῆ, τὰ δὲ μετ' ἐκεῖνα
ἐγένετο, οὐκ ἂν τῶν ἀοράτων δυνάμεων
μετὰ τούτων ἐποίησατο μνήμην, ἐν τοῖς
ἐκ τῶν οὐρανῶν ἀριθμήσας κακείνας, εἰ μὴ
σαφῶς ἦδει μὴ πρὸ οὐρανοῦ καὶ γῆς αὐτὰς
γεγονυίας ἀλλὰ σὺν αὐτοῖς μὲν λαβούσας
τὸ εἶναι, ἔνδον δὲ αὐτῶν εἶναι ταχθείσας
ἅτε καὶ μέρος οὐσας τῆς κτίσεως.

οὐρανοῦ' καλέσας τὸν πρῶτον, ὃς οὐρανόσ
ἐστι τούτου τοῦ ὀρωμένου στερεώματος·
εἶτά φησι· 'καὶ τὸ ὕδωρ τὸ ὑπεράνω τῶν
οὐρανῶν', ἵνα εἴπη τοῦ οὐρανοῦ· διαρρήδην
νῦν τὰ ἐπάνω εἰρηκῶς, εὐδηλὸς ἐστὶν
εἰδῶς τὰ πρότερα ὑποκάτω ... λοιπὸν τὰ
πάντα συνάπτει λέγων· 'Ἡ ἐξομολόγησις
αὐτοῦ ἐπὶ γῆς καὶ οὐρανοῦ', ἅμα δηλώσας
ὅτι καὶ ἔσωθεν γῆς καὶ οὐρανοῦ εἰσι
πάντα, ὁμοίως καὶ αὐτὸς τῷ Μωϋσῆ
εἰρηκῶς, ὃς ἔφησεν· 'Ἐν γὰρ ἕξ ἡμέραις
ἐποίησεν ὁ θεὸς τὸν οὐρανὸν καὶ τὴν γῆν
καὶ πάντα τὰ ἐν αὐτοῖς', ἔτι φανερώτερον
δηλώσας πάντας τοὺς ἀγγέλους ἔσωθεν
οὐρανοῦ καὶ γῆς καὶ
περιγραφομένους ὑπ' αὐτῶν.

In I.18, 44.21–23 Philoponus quotes another Bible passage, used by Theodore as a proof for his supposedly correct belief, viz., *1 Corinthians* 4.9,⁶³ “we have become a spectacle to the world, both to angels and to men.”⁶⁴ Thereby Theodore, according to Philoponus, thinks himself to have proved that the angels came into being together with heaven and earth, “for,” Theodore says, “it is ridiculous to believe that they existed *before* the world, if they, according to Paul, is a part of the world in the same way as the humans.” If now Theodore thinks that this is ridiculous, Philoponus repays him in kind when he, a little further on in this chapter (I.18, 45.13–48.10), rebukes him for his exegesis of *Psalms* 148. This exegesis is strictly literal in the Jewish way, Philoponus claims (μόνῳ τῷ γράμματι προσέχων ἰουδαϊκῶς), and such exegeses lead to absurdities. Philoponus then cites several Bible passages in order to show his point, among others *Psalms* 2.4, “He who lives in the heavens shall laugh at them and the Lord shall mock at them,”⁶⁵ and *Isaiah* 66.1, “The heaven is my

⁶³ Cosmas uses *1 Corinthians* four times in *Topography* (II.108, V.245, VI.34, VII.48) in order to prove that the angels dwell in this world, but I have not found that he uses the passage to prove that they were created at the same time as heaven and earth.

⁶⁴ *1Cor.* 4.9 θέατρον ἐγενήθημεν τῷ κόσμῳ καὶ ἀγγέλοις καὶ ἀνθρώποις.

⁶⁵ *Psalms* 2.4 ὁ κατοικῶν ἐν οὐρανοῖς ἐκγελάσεται αὐτοὺς καὶ ὁ κύριος ἐκμυκτηριεῖ αὐτούς.

throne and the earth is my footstool.”⁶⁶ If now Theodore only sees the literal meaning and neglects the spiritual meaning, then he also will see God as a part of this world and delimit the heaven as his house and his throne and the earth as his footstool. But where did God dwell before the creation of the heaven, and what was his footstool before the creation of the earth?

And Philoponus goes on to criticize Theodore’s literalism, claiming that he will attribute to God both wrath, sorrow and sleep, as well as waking up, regret, joy and laughter. But human feelings are not enough, Philoponus says; Theodore might also attribute to God human limbs like hands, fingers, feet, right-hand side, eyes, eyelids, ears, mouth, heart, forehead and back, as all these parts are mentioned in the Bible. He might, in other words, provide God with a human body, human voice and even age as it is written in *Daniel* ‘old of days’ (ὁ παλαιὸς τῶν ἡμερῶν). Philoponus refutes this as godlessness and stupidity. He also shows that he is not only aware of the metaphors in the Bible but also sees the necessity of them, namely, that the metaphors can lift us humans to cherish more godly conceptions (ἐκ τῆς τούτων ἀναλογίας εἰς ἐννοίας ἡμᾶς θειοτέρας ἀνάγουσιν αἱ θεόπνευστοι γραφαί). And Philoponus goes on explaining that God’s eyes, e.g., can stand for the conception that God can see everything. The hearing of his ears can mean that nothing is hidden from him and we cannot do anything, good or bad, without God being aware of it, and so on. The result will be that all that which has been said in this manner can show itself to be useful and lead us humans to a worthy knowledge about God.⁶⁷ But this was not the case with his opponent, Theodore. One example of this fact is that God made use of his voice in order to instruct the angels.⁶⁸

Eager to point out that we cannot know *when* the angels came into existence and that they were not created *together* with heaven and earth, Philoponus, in I.20, 50.7–52.5, takes up the discussion about the order of the creation of the universe. First Philoponus claims that not everything in the *Psalms* is enumerated in the right order. To this end he once again cites from psalm 148. He begins with the third verse, “Praise him sun and moon”, to which is added “praise him all you stars and the light.”⁶⁹ Thereby it is obvious that king David

⁶⁶ *Is.* 6.1 ὁ οὐρανὸς μοι θρόνος, ἡ δὲ γῆ ὑποπόδιον τῶν ποδῶν μου.

⁶⁷ It could be of interest to notice that Dionysius Areopagita gives a similar and detailed explanation of the *angels* and their likeness to humans when it comes to abilities and mental qualities. See *Celestial Hierarchy* 15.3. 329D–332D.

⁶⁸ See, e.g., *Topography* III.13.

⁶⁹ *Psalms* 148.3 αἰνεῖτε αὐτὸν ἥλιος καὶ σελήνη, αἰνεῖτε αὐτὸν πάντα τὰ ἄστρα καὶ τὸ φῶς.

did not follow the Mosaic order, for he puts the light after the sun, the moon and the stars. Further, he added, “Praise him heavens of the heavens”,⁷⁰ ignoring the fact that the heaven was created in the beginning and was created before everything else. Then king David sings: “Praise him from the earth you dragons and all abysses”, and he adds “fire, hail, snow, ice and storm.”⁷¹ Thereby he did *not* observe the natural order, according to Philoponus, for all these things are above the earth and it is ice alone that freezes itself strong on the earth. Philoponus also adds one example from *Daniel* and cites from the psalm sung by the three young men who were trapped in the blazing furnace: “Stars of heaven, praise the Lord, every shower of rain and dew, praise the Lord.”⁷² Since it is a fact that the rain is produced in the air but the dew seems to arise around the earth, Philoponus uses this example together with the example from psalm 148 to show that neither of the psalms does separate what comes from the heaven from what comes from the earth. Philoponus points out that the psalmist first mentioned what was created first of all, heaven and earth. In which order and in what way the psalmist then continues seems to be rather indifferent to Philoponus. The important thing must be to state that the psalmist’s intention had been to make a psalm to God, a psalm containing all God’s creation giving him praise for his work.

As we have seen, Philoponus has made it clear that the *Psalms* are not reliable proofs, neither for the time nor for the order of the creation. Cosmas, on the other hand, holds the psalms to be absolutely reliable.

In *Topography* V.245–246 and again in VII.53–54 Cosmas wants to prove that his point of view about the hierarchy of the creation is the right one. To this end he is extremely eager to show that both David and Daniel, in their respective psalms, are in accordance with Moses’ story of the creation. He stresses that everything that exists within the universe, from the firmament and down to the very lowest parts, is on a level which is below the firmament. To give force to his words he cites *Psalms* 148.4, “Praise him you heavens of heavens and you waters above the heaven”⁷³ (V.245), and from *Daniel* 13.59–60, “Bless the Lord you heavens and all waters above the heaven”⁷⁴

⁷⁰ *Psalms* 148.4 αἰνεῖτε αὐτὸν οἱ οὐρανοὶ τῶν οὐρανῶν.

⁷¹ *Psalms* 148.7–8 αἰνεῖτε τὸν κύριον ἐκ τῆς γῆς, δράκοντες καὶ πᾶσαι ἄβυσσοι, πῦρ χάλαζα χιῶν κρύσταλλος πνεῦμα καταγίδος.

⁷² *Dan.* 3.63–64 εὐλογεῖτε ἄστρα τοῦ οὐρανοῦ τὸν κύριον, εὐλογεῖτε πᾶς ὄμβρος καὶ δρόσος τὸν κύριον.

⁷³ *Psalms* 148.4 Αἰνεῖτε αὐτὸν οἱ οὐρανοὶ τῶν οὐρανῶν καὶ τὸ ὕδωρ τὸ ὑπεράνω τῶν οὐρανῶν.

⁷⁴ *Dan.* 3.59–60 Εὐλογεῖτε, οὐρανοί, τὸν Κύριον, ὕδατα πάντα ἐπάνω τοῦ οὐρανοῦ.

(V.246), as he intends to prove that the two prophets, by these verses, clearly have separated what is above the firmament and what is below.

In *De Opificio Mundi* I.20, 51.14–52.5 Philoponus continues to deliver his criticism against Cosmas' literalism and states that Moses has not said anything whatsoever about the creation of the spiritual and incorporeal. The psalmist, on his side, has begun his description of the creation by mentioning the most worthy, which is the heaven. In this context he also includes the incorporeal and logical (ἀσώματους καὶ νοεράς) hosts of angels, as it seems most fitting to connect these worthy beings with what is considered by us humans to be the most worthy, viz., the heaven. Besides, the psalmist has had one single purpose in mind, to compose a psalm in order to honour God.

Philoponus' criticism against Cosmas' literalism is undoubtedly fair, and it seems to be a fact that it is in his comments on the *Psalms* that the theology of Theodore of Mopsuestia appears most absurd. It also appears to me that it is in the discussion about the substance of the angels that Cosmas' and Philoponus' ways of thinking differ most of all. Here Philoponus steps forward as the true philosopher and he is to display an advanced philosophical discussion. Cosmas, on his part, accounts for his views in a more superficial way, a fact which is not surprising, considering his background and his education or lack of it. We know that Cosmas' views and thoughts, for the most part, correspond with Theodore's, his authority in this field. Theodore, however, did not have the philosophical education to that degree with which Philoponus was equipped.

In *De Opificio Mundi* I.9, 19.4–11 Philoponus discusses the consequences that would follow if it were true that the angels came into being simultaneously with heaven and earth. If that were the case, then the angels should be either altogether corporeal, or they should be incorporeal like the human souls but tied to a body. But they were not intended, in the beginning of existence, to have bodies, only to exist as incorporeal beings (ἀσώματα).

4.4.2 The philosophical reasoning of Philoponus

In I.9, 19.12–21.12 Philoponus continues his reasoning in a typical way, found in most philosophical texts. He puts the question: "If the angels are corporeal in substance, are they created from the four elements or from another body beside these, as for example Aristotle introduced the fifth element, which moves in

circles?”⁷⁵ And Philoponus demands to be shown how such a substance is constructed and from what inspired document (θεοπνεύστου γραφῆς) Theodore has learnt about it. But if now the celestial beings are created from one or several of the elements found here on earth, then Theodore must, in clear words, show which document it is that teaches such a fact.

Philoponus then snatches away a Bible passage that his opponent might make use of, when he cites *Psalms* 103.4: “He who makes his angels into winds and his servants into a flame of fire.”⁷⁶ Philoponus also states that the flame of fire, here spoken of, by no means can allude to the fire which exists on earth. Nor can the winds allude to the wind here on earth. Would that be the case, one angel made from the former would exist as a body of fire and another angel made from the latter would exist as a body of air. It should be mentioned that modern Bible translations build on the Hebrew text and the translation of *Psalms* 103.4 gives a kind of reverse meaning (the winds become angels and the flame of fire becomes servants). Philoponus, on his part, is likely to have interpreted the verse as indicated above, and that interpretation is confirmed by what follows, where Philoponus further stresses his point by citing *John* 4.24, where Jesus says to the Samaritan woman who believed that God was attached to a certain place: “God is spirit (πνεῦμα) and those who worship him should do so in spirit and in truth.”⁷⁷ Philoponus makes his standpoint clear: πνεῦμα and πῦρ must be interpreted metaphorically here as well as in the other citations he has made. It is in the incorporeal and invisible soul that the incorporeal and invisible God should be worshipped (ἐν τῇ ἀσωμάτῳ καὶ ἀοράτῳ ψυχῇ τὸν ἀσώματον καὶ ἀόρατον προσκυνητέον θεόν). In his eagerness to show his point that God really is incorporeal, Philoponus cites Moses: “Our God is a consuming fire”.⁷⁸ Still we know that God neither is wind nor fire. The metaphors for God may differ, but what is important to bear in mind is that God and his holy powers occasionally draw down into corporeal presentations or natures. Philoponus must mean, implicitly, that this is done for the benefit of humans.

⁷⁵ Εἰ μὲν οὖν σώματα μόνον τὴν οὐσίαν ὑπάρχουσι, πότερον ἐκ τῶν τεσσάρων ἢ ἐξ ἑτέρου παρὰ ταῦτα γεγονάσι σώματος, οἷον φέρε καὶ Ἀριστοτέλης τὸ πέμπτον καὶ κυκλοφορούμενον εἰσηγήσατο σῶμα.

⁷⁶ *Psalms* 103.4 Ὁ ποιῶν τοὺς ἀγγέλους αὐτοῦ πνεύματα καὶ τοὺς λειτουργοὺς αὐτοῦ πυρὸς φλόγα. This text is cited from Philoponus. *LXX* writes πῦρ φλέγον instead of πυρὸς φλόγα.

⁷⁷ *John* 4.24 Πνεῦμα ὁ θεὸς καὶ τοὺς προσκυνοῦντας αὐτὸν ἐν πνεύματι καὶ ἀληθείᾳ δεῖ προσκυνεῖν.

⁷⁸ *Deut.* 4.24 Ὁ θεὸς ἡμῶν πῦρ καταναλίσκον.

Philoponus further claims that, if the angels had their substance from one element or from all four of them, they would be corruptible as they then were made from corruptible matter. Being corporeal they would not be equipped with reason and knowledge, even if they were made from another incorruptible body. No body, simple or composed, has a share in knowledge. But the words (the Scriptures) teach nothing about how those servants of God are constituted, those who all the time contemplate the face of God.⁷⁹

Much has been said about Philoponus' conception about the angelic substance, and now we turn to Cosmas.

4.4.3 The corporeality of angels (Cosmas)

It is actually difficult to trace Cosmas' conception of the substance of the angels. But it seems quite clear, though, that he imagines them to be corporeal. Of course this does not mean that he believes them to be equipped with bodies which are destructible, and Philoponus says in *De Opificio Mundi* I.9, 20.15–18 that, if the angels had their substance from one element or from all four, they would be created from destructible bodies, a fact in which not even Theodore believes. Of course there can be a certain difference between Theodore and Cosmas on this point. Cosmas at least, believes that the angels are subjected to changes of some kind.

In *Topography* II.98 Cosmas cites *Romans* 8.22, “The whole creation still laments and is in travail together.”⁸⁰ Cosmas then makes an exegesis where he states that Paul makes it clear that the whole creation has let itself to be enslaved in this life of destruction and change. Particularly so the angels, Cosmas adds, on his own responsibility. He then stresses that also the angels are subjected to change and that they suffer from this all the time. They count on, however, and hope for liberation. They long for this freedom and they will have it, as it has been said by Paul in his letter to the Romans, according to Cosmas.

In III.41, when Cosmas makes a summary of the instruction of the angels by help of the order of the creation, he once again states that the angels are equipped with reason but subjected to change (τῶν ἀγγέλων λογικῶν ὄντων καὶ τρεπτῶν). This is the reason why one day of creation could not be enough.

⁷⁹ Dionysius Areopagita says in *De caelesti hierarchia* II.137B: “The Word of God makes use of poetic imagery when discussing these formless intelligences but it does so, not for the sake of art, but as a concession to the nature of our own mind.”

⁸⁰ *Rom.* 8.22 Πᾶσα ἡ κτίσις συστενάζει καὶ συνωδίνει ἄχρι τοῦ νῦν.

One single day would not be enough for the instruction of the angels. As they are beings of intelligence, they needed six days to make a judgement, day by day, of every single creative performance.

In IX.20 Cosmas explains that it is impossible for us mortal, corruptible beings, still subjects to change, to pass beyond the stars. But the same is also valid for the angels. They must first, together with us, be delivered from their slavery and after having thrown down the stars to the earth they will gain their immutability and their freedom. Then Cosmas cites *I Corinthians* 15.50, “Flesh and blood cannot inherit the Kingdom of God”,⁸¹ and his exegesis of this passage results in the interpretation that Paul by ‘flesh’ refers to mortality and by ‘blood’ refers to changeableness. Then it must be impossible for those who still are mortal or *changeable* to inherit the Kingdom of God. In order to stress that what is subjected to corruption cannot inherit the indestructible, Cosmas continues to cite the end of the verse, “Neither will corruption inherit the incorruptible.”⁸² This sounds very depressing and it seems strange that Cosmas, who usually is careful, not to say circumstantial, has not continued his exegesis and explained that there will be a transformation when the perishable will be transformed into imperishableness and the mortal into immortality.

I regard the passages above from the *Topography*, which I have accounted for, to show that Cosmas must believe the angels to be corporeal. If they are subjected to change, they will in that respect be rather like the humans. They may have been created from another, finer matter, but still from matter. If they were absolutely incorporeal, created without any matter whatsoever, how could they be subjected to change? Still, Cosmas believes that the angels *are* subjected to change and that they will not be delivered from changeability until they have finished their service of men. This will happen on the Last Day when also the above-mentioned transformation will take place.

When I now pass on to deal with the subject concerning the residence of the angels and thereafter that of their different tasks, I think that Cosmas’ opinion on the substance of the angels will appear more distinct.

⁸¹ *ICor.* 15.50 Σὰρξ καὶ αἷμα βασιλείαν θεοῦ κληρονομήσαι οὐ δύνανται.

⁸² *ICor.* 15.50 Οὐδὲ ἡ φθορὰ τὴν ἀφθαρσίαν κληρονομεῖ.

4.5 The residence of angels

4.5.1 Philoponus' philosophical standpoint

The question about *where* the angels sojourn is a matter of considerable difference between Cosmas and Philoponus. Philoponus is the philosopher, the scientist who has come to the conclusion in his research that the angels are incorporeal. And, according to him, what is incorporeal does not belong to a place. Cosmas represents a view which is held not only by himself and Theodore of Mopsuestia but by the greater part of Christendom, at least in the sixth century, namely, that the angels have their abode somewhere between heaven and earth.

In *Corollary on Place* 558.28–31 Philoponus says that “the extension that forms place is bodiless and separable from body and self-subsistent, not having its being in a substrate. All the more, then, will it be able to be applied to the body and leave it unaffected.”⁸³ In 560.11–13 he says: “since place is an extension that in its own definition is void, it will only be filled by the body that comes to occupy it.”⁸⁴ If now the angels are incorporeal, which Philoponus claims, how could they be in a place?

In *De Opificio Mundi* I.16, 36.1–5 Philoponus puts the straight question to Theodore, “where are any of the holy words to be found which you (Theodore) claim that all people have heard to be said, namely, that the incorporeal (ἀσώματοι) and rational (νοεραί) hosts of angels are limited by the space between heaven and earth?”⁸⁵ An answer to this question could perhaps be found in popular parlance; in the Bible it is not to be found. Then Philoponus brings forward his conviction that it belongs only to bodies to be in a place, since bodies extend in three dimensions and place is extension (διάστημα). Angels are not corporeal, nor are they incorporeal of such a kind as the human souls, which have been equipped with bodies as tools. The human soul is not *per se* but *per accidens* in a place, that very place where the human body, in which the soul is housed, happens to be. Because the body is spatial, the soul

⁸³ Furley (1991) 17. *Corollary on Place* is a document with which Philoponus interrupts his commentary on Aristotle's *Physics*. Aristotle had denied a three-dimensional space. Philoponus refutes him and puts forward his own view that place is an immobile three-dimensional extension.

⁸⁴ *Ibid.* 19.

⁸⁵ Καὶ ποῦ τῶν ἱερῶν λογίων τινός, ἵνα καί, ὡς σὺ φῆς, ἀπάντων ἤκουσας λεγόντων, ὅτι μέσον οὐρανοῦ καὶ γῆς περιγεγραμμένοι εἰσὶν αἱ ἀσώματοι καὶ νοεραὶ τῶν ἀγγέλων τάξεις.

also moves *per accidens* spatially when the body moves. The angels, on the other hand, are absolutely incorporeal and they are not even *per accidens* in a place and nothing is said about their ability to be moved spatially.

Cosmas does not agree with Philoponus' train of thought, and I would rather say that he does not understand Philoponus' view on incorporeality and limitlessness. Perhaps he tries to make it easier for himself by introducing the question about the human soul.

4.5.2 Cosmas' literalistic criticism

In *Topography* I.30 Cosmas says that his opponents assert that heaven is a body and that it surrounds the whole universe (τὸν οὐρανὸν σῶμα λέγοντες εἶναι περιέχειν λέγουσι τὸν πάντα κόσμον). But though they defend the thought that there is nothing outside the universe, they claim that angels, demons and souls, although they too are parts of this universe, are not circumscribed (ἀπερίγραφος). They do not surround the heaven and are not surrounded by it. But this state, neither to be surrounding nor to be surrounded, is an absurdity and an impossibility in Cosmas' eyes. He makes focus on the human soul and puts his opponents, or rather his opponent Philoponus, up against the wall, when he wants an answer about their own souls. Do their souls exist or not? Should the answer be that the souls do not exist, what a shamelessness to declare oneself to be without a soul! Should the answer be, on the other hand, that their souls do exist, then the question must be put: do their souls exist within them or outside their bodies? Should the answer be the latter, then again it is a shame! As a final point for his arguing and for the chapter, Cosmas puts the both clever and justifiable question: "When now the body is circumscribed by the heaven, why is not the soul circumscribed with it?" (Τοῦ σώματος περιγραφομένου ὑπὸ τοῦ οὐρανοῦ, πῶς οὐ συμπεριγράφεται καὶ ἡ ψυχή;).

In II.108 Cosmas continues with another interesting argument with its starting-point in the human soul. He claims that the very Bible teaches that angels, demons and souls are limited (πάντας περιγραπτοὺς λέγει ἡ θεία Γραφή) to exist within this world. To this end he supports himself among other things on *I Corinthians* 4.9:⁸⁶ "We have become a spectacle to the world, both to angels and men."⁸⁷ And it is understandable that, guided by this passage, Cosmas might wonder: if angels and men are mentioned together in this

⁸⁶ Cosmas also supports himself on *Dan.* 10.13–14 and *Psalms* 138.8–10.

⁸⁷ *ICor.* 4.9 θέατρον ἐγενήθημεν τῷ κόσμῳ καὶ ἀγγέλοις καὶ ἀνθρώποις.

connection, why would men be in this world and angels not? Citing this same Bible passage again in VII.48, he stresses that both humans and angels are in the same place (ὡς ἐν ἐνὶ χώρῳ ὄντων πάντων τούτων τε κακείνων). And from other examples (cited in II.108), why should expressions like εἰστήκει ἐξ ἐναντίας μου, ἦλθε, ἀπῆλθε and κατέλιπον αὐτὸν ἐκεῖ be used if they did not allude to creatures which are limited? God and God alone is unlimited, Cosmas states, supporting himself on *Psalms* 138.8–10. To a literal reader like Cosmas, these specific expressions, cited above, must carry great weight when it comes to support his conviction that angels and men share approximately the same conditions in this world. The angels may be invisible, logical beings equipped with reason, still they are limited to dwell in this world. The same is valid for the soul of man, it is incorporeal, intellectual and equipped with reason (ἀσώματος, νοερά, λογική), but it is still confined (περίγραφος) by the body.

4.5.3 Philoponus' problem

This view on the human soul, namely, that it is incorporeal and still confined by the body creates a difficulty to Philoponus. In I.9, 22.19 and I.16, 38.16–20 it is quite obvious that he is aware of this difficulty. He stresses that he does not believe that the angels are made from corporeal substance (σῶμα). Either, he says, they are not corporeal at all, or they are incorporeal by substance and equipped with body as a tool like our souls. This being the case, however, they would be mortal like us. Philoponus, accordingly, seems to take three conditions into account, (i) incorporeal and unlimited (ἀσώματος καὶ ἀπερίγραφος), (ii) incorporeal but equipped with a body as a tool (ἀσώματος καὶ ὀργανικὰ σῶματα περικείμενος), and (iii) corporeal (σῶμα). For the angels he reckons with the first condition and for the souls he reckons with the second. Angels, consequently, differ from souls as they are not involved with body (σῶμα) at all. By separating the angels from the human souls in this way, Philoponus evades from being affected by Cosmas' argumentation which takes its starting-point in the human soul.

Philoponus then makes the important remark that the Bible does not teach whether the angels are mortal or immortal or even if they have a body or not. When angels do appear in human form they do not entirely make use of bodies as tools. They do appear dressed in a brilliant dress. Philoponus finishes chapter 9 by making a comparison of how God himself appeared to Abraham, Jacob, Daniel and others in human form. Therefore, not only the angels, but even God could appear to be anthropomorphous, not to speak of the other forms of life in which the divinity could appear. But no person equipped with reason could

from these appearances even imagine anything about the corporeality of God. If the angels are altogether incorporeal, their existence has nothing in common with bodies, inasmuch as nothing animated got its existence at the same time as heaven and earth.

Once again in I.15, 34.14–15, Philoponus briefly but firmly states that the angels are neither corporeal nor incorporeal with a body around them like our souls.⁸⁸ They are absolutely incorporeal and they are not brought into existence wearing a body. They are supra-mundane.

4.6 The concepts of magnitude and dimension

4.6.1 Corporeality and space

In I.16, 37.3–38.4, Philoponus also records that Theodore says that the angels are intelligible (νοητός) and rational (λογικός). He is surprised that his combatant further claims that the human soul is intelligible. According to Philoponus, Theodore has uttered: “He made our souls akin to these natures [sc. the angels], intelligible and sharing eternal life and also reason (λόγος), which holds sway within us.”⁸⁹ Philoponus continues by accusing Theodore of misunderstanding the meaning of what he has said himself. The intelligible is the opposite of the object of perception and every perceptible thing (αἰσθητόν) is body. So what is not perceptible but intelligible must be incorporeal. What is corporeal is not equipped with reason and *no body* has any knowledge about God, not even when it is animated (cf. the animals). The logical element is in the incorporeal substance which is the case with the human souls. If now the substance of the angels is incorporeal and equipped with reason, they must be without magnitude, unextended (ἀμεγέθης). There are three kinds of magnitudes: body (σῶμα), surface (ἐπιφάνεια) and line (γραμμή), and a body has three dimensions: length (μῆκος), breadth (πλάτος) and depth (βάθος). The limit of the body is a surface which extends in two dimensions, length and breadth. The line is the limit of the surface and extends in the length. Every surface and every line have their existence in a body. If now, being in a place

⁸⁸ μήτε σώματά εἰσι μήτε ἀσώματοι οὐσῖαι περικείμεναι σώματα καθάπερ καὶ ἡ ἡμετέρα ψυχὴ.

⁸⁹ συγγενεῖς δὲ ταῖς φύσεσι ταύταις καὶ τὰς ἡμετέρας πεποίηκε ψυχὰς νοητὰς τε οὐσας καὶ ζωῆς ἀθανάτου μετεχούσας καὶ μὴν καὶ λόγου γε τοῦ κρατιστεύοντος ἐν ἡμῖν.

only is valid for a body, then it is impossible for an incorporeal substance to be in a place.

Once again, in I.16, 38.5–20, Philoponus accuses Theodore, now of ignorance and of speaking about magnitudes and masses when what he speaks about is the incorporeal and the intelligible. He speaks without understanding the meaning of these words (οὐκ εἰδόσιν εἰδέναι τι δοκοῦντες κἂν περιλαλῶσι τὸ ἀσώματον καὶ νοητὸν οὐκ ἐφιστάνοντες τῇ τῶν λέξεων σημασίᾳ εἰς μεγέθη πάλιν καὶ ὄγκους ἐξολισθάνουσιν). When Philoponus, in I.16, 38.9–20 criticizes Theodore for claiming that the angels are within heaven and earth, then he obviously interprets this view to mean that the angels are limited by a place. To Philoponus it is quite comparable to say this about the angels, as if someone should say that air, water and fire are within heaven and earth. Accordingly, Philoponus puts the question how the angelic and the incorporeal substances could be in a place as if they *too* were made from the elements, which they are not, according to Philoponus. It is true that the soul is in our body, but it dwells there in order to give life to the body and, by doing so, it is spatial *per accidens*, not *per se*. It is only for the body to be in a place.

In I.16, 38.21–39.18 we learn that Philoponus is of the opinion that, when Theodore says that the angels are incorporeal, he seems to mean that they are equipped with bodies made from a very fine substance; fine to such a degree, actually, that they are not even perceptible. Philoponus then makes a comparison with the elements and states that the fire is the finest element and as such it would be the most incorporeal. Now, air is finer than water and could be said to be incorporeal in comparison to water. The same is valid for water in comparison to earth. Therefore, in this way it could be said of each element that it is both corporeal and incorporeal. This is to be laughed at, not worth to be contradicted, according to Philoponus. Every substance with three dimensions *is* a body, however fine its parts may be. The incorporeal substance is devoid of dimension. If the angelic substance extends in three dimensions, it *is* body, may its parts be ever so fine and inaccessible to perception of touch. The indivisible and that which is without extension, on the other hand, how could that be spatial when neither a surface nor a line are spatial *per se*? Bodies alone are spatial, therefore if something is spatial it indeed *is* body.

In I.16, 39.24–40.14 Philoponus takes offence at Theodore's opinion that the angelic substance exists in space. Philoponus accuses Theodore of believing the angels to be nothing but bodies made from all four elements or from one of

them.⁹⁰ Even if Theodore says that they are intelligible like our souls, he does not know what intelligible (νοητόν) means. If the angels are made from one or from all four elements, they must be corruptible and Theodore can hardly claim that, while the elements and the angels made from them are corruptible, still the different parts of which they consist are incorruptible. The Bible does not say such a thing and the apostle shows that all bodies are going to vanish when he says: “And creation itself will be delivered from the slavery of corruption to the freedom of glory of the children of God.”⁹¹ Nothing which is corruptible has a share in what is incorruptible. One single exception—the Lord’s body.

4.6.2 The concept of limitation

In I.17, 41.4–25 Philoponus gives voice to his conviction that Theodore does not understand the idea of ‘limitation’ (περιγραφή). According to Philoponus, Theodore would mean that limitation is valid for space and space only. The angels, being corporeal, are limited by space, which in this case consists of heaven and earth, and hence got their existence together with heaven and earth. Philoponus also quotes Theodore: “It is necessary to inquire into where they *then* were, who *now* are limited by this space. For it could not be possible that they were unlimited and then became limited. Instead of a limit for these particular angels, one has to ask which space they occupied earlier, limited in the same way as they are now when they are in this space.”⁹² Philoponus puts off this utterance of Theodore’s as something which is foolish. To search for a space which existed before the visible, to ask for an extension and a limit when it comes to the incorporeal and the spiritual is to Philoponus nothing but nonsense. He considers, as we have seen, the incorporeal and the spiritual to be beyond all that is connected with the corporeal. Theodore, on the other hand, cannot imagine the angels to be incorporeal and their respective views are incompatible. It should be noted, however, that Philoponus makes a clear distinction between local and other kinds of limitation. Even if the angels are

⁹⁰ It should be noticed that Philoponus, at the time when he wrote *De Opificio Mundi*, no longer admitted a fifth element, which he had done earlier.

⁹¹ *Rom.* 8.21 καὶ αὐτὴ ἡ κτίσις ἐλευθερωθήσεται ἀπὸ τῆς δουλείας τῆς φθορᾶς εἰς τὴν ἐλευθερίαν τῆς δόξης τῶν τέκνων τοῦ θεοῦ.

⁹² Ἀνάγκη δὴ ἄρα κάκεινο ζητεῖν ὅπου τότε ἦσαν αἱ νῦν τῷδε περιγεγραμμένοι τῷ τόπῳ. οὔτε γὰρ ἀπεριγράφους οὔσας ὑπὸ περιγραφὴν γενέσθαι οἷόν τε ἦν. περιγραφῆ δὲ ὑποκειμένων ἀνάγκη ζητεῖν τίς τόπος εἶχεν αὐτὰς πρότερον, ἐν ᾧπερ ἦσαν περιγεγραμμένοι, καθάπερ νῦν εἰσιν ἐν τούτῳ τῷ χώρῳ.

not circumscribed by space and in this respect are like God, they have their limits in other respects. They have, e.g., limited power as well as limited knowledge.⁹³

4.6.3 Cosmas' arguments from Scripture

Cosmas is firm as a rock in his conviction that it is in the Bible he can find all the answers as to where the angels dwell. In *Topography* V.245–247 he mentions a series of passages apt to support his conviction.⁹⁴ If we read these passages literally, there is nothing to prevent us from believing that the angels sojourn within heaven and earth together with all other created beings, and this is exactly Cosmas' point.

In VII.48 Cosmas is more specific and actually goes against his opponent. “For their sake, who claim that the angels are in the higher, heavenly world, we will display verses from the Bible,” he says. “These verses will show that the angels live together with us in this world and that none of them as yet has been found worthy to pass on to the world above.” He once again cites *1 Corinthians* 4.9 and also *John* 3.13: “No one has gone up to heaven, except he who went down from heaven, the Son of man who is in heaven”.⁹⁵ This is a statement of Jesus and should be of great value to the literalist Cosmas. But he must have ignored the last words of the passage ‘who is in heaven’. When Jesus spoke these words, he was on earth, not in heaven, at least not in the sense Cosmas must mean by ‘being in heaven’.

From VII.55–59 Cosmas once again makes an explanation about the angelic abode by help of Bible passages. I will cite the verses that I believe are the most important in this context, viz., *Psalms* 148.5–6: “He spoke and they were born. He commanded and they were created. He *gave them a place* for ever and ever, he made an ordinance and it will not vanish.”⁹⁶ Cosmas cites another verse from *Psalms* 148 and then claims that David speaks in accordance with *Exodus* 20.11, when Moses says: “In six days God created heaven and earth and

⁹³ *De Opf. M.* I.18, 43.4 ff.

⁹⁴ *1Cor.* 4.9, *Psalms* 148.14, *Dan.* 3.59–60, *Psalms* 103.2–4.

⁹⁵ *John* 3.13 Καὶ οὐδείς ἀναβέβηκεν εἰς τὸν οὐρανόν, εἰ μὴ ὁ ἐκ τοῦ οὐρανοῦ καταβάς, ὁ Υἱὸς τοῦ ἀνθρώπου, ὁ ὢν ἐν τῷ οὐρανῷ.

⁹⁶ *Psalms* 148.5–6 Ὅτι αὐτὸς εἶπε, καὶ ἐγενήθησαν· αὐτὸς ἐνετείλατο, καὶ ἐκτίσθησαν· ἔστησεν αὐτὰ εἰς τὸν αἰῶνα καὶ εἰς τὸν αἰῶνα τοῦ αἰῶνος· πρόσταγμα ἔθετο, καὶ οὐ παρελεύσεται.

everything in them.”⁹⁷ It is quite understandable that Cosmas could interpret these verses in the way he did. If we can understand and imagine the angels to be corporeal, at least to some extent, as Cosmas did, there is nothing strange in their being in a place. Nor would it be difficult to imagine the angels to be included when Moses says that God in six days had created heaven and earth and everything in them.

In VII.59 Cosmas takes strong measures to convince us that the angels really are inhabitants of this world. In doing so, he turns to ecclesiastical tradition, much in the same way as Philoponus does, when he turns to Basil. Cosmas enumerates different kinds of divinely inspired men like prophets, apostles, martyrs, etc. and their works. Thereby, Cosmas claims that these holy men have not spoken about the two conditions—this idea so precious to Cosmas. What they have preached, however, in order to draw all peoples to piety, is that this world belongs to both angels and humans. They have also preached that the superior world belongs to angels and humans after the resurrection from the dead. When Cosmas claims this, we might highly suspect that the question about *where* the angels dwell is of almost the same dignity to him as the idea of the two conditions which, in turn, is the corner-stone of his doctrine.

Let us now examine what the two opponents have to say about the tasks that the angels have to perform in the universe.

4.7 The purpose of angels

4.7.1 Servants of God (Philoponus)

In the beginning of time God gave man the charge to cultivate and to preserve the earth.⁹⁸ Were the angels given a similar knowledge? In *De Opificio Mundi* I.9, 20.24–21.12 Philoponus says, in connection with the question about the nature of the angels, that they are servants of God and that they all the time contemplate the face of God. Presumably he has *Matthew* 18.10 in mind, where Jesus speaks about the children’s guardian angels. This is the greatest knowledge of all, according to Philoponus, to get to know what that face commands. But he also mentions a couple of passages from the Old Testament

⁹⁷ *Ex.* 20.11 Ἐν γὰρ ἕξ ἡμέραις ἐποίησεν ὁ θεὸς τὸν οὐρανὸν καὶ τὴν γῆν καὶ πάντα τὰ ἐν αὐτοῖς.

⁹⁸ *Gen.* 2.15 Καὶ ἔλαβεν κύριος ὁ θεὸς τὸν ἄνθρωπον ὃν ἔπλασεν, καὶ ἔθετο αὐτὸν ἐν τῷ παραδείσῳ ἐργάζεσθαι αὐτὸν καὶ φυλάσσειν.

which describe how angels came to the help of humans in times of distress.⁹⁹ This is not a sign of corporeal nature, but of incorporeal, rational and logical substance which is obeying God.

It is interesting to see, how Philoponus brings forward Bible passages which point to the power of the angels.¹⁰⁰ Sometimes this power is used for help, other times for punishment and revenge, but the angels are without doubt equipped with power. Philoponus, on his part, does not seem to put the angelic ability and obedience in question.

In I.10, 24.24–25.21, when he has discussed their substance, Philoponus makes a comparison with the human soul and establishes that also the soul was created as a being without body. How much more should not angels, who highly surpass the human souls regarding substance, power and knowledge, be worthy of an existence surpassing that of our souls. Doubtlessly, Philoponus thinks highly of the angels. Their incorporeality does not diminish their power in any way whatsoever. On the contrary, he seems to estimate them more than he estimates the human souls and in I.22, 58.21–59.2 he rebukes Theodore for considering the angels to be inferior to humans when it comes to reason.

4.7.2 Servants of men (Cosmas)

Cosmas' view on the angelic functions is different from Philoponus' view in one important respect. While Philoponus considers the angels to be servants of God, Cosmas, on his part, looks upon them as servants of men. In *Topography* II.85 Cosmas cites *Hebrews* 1.14: “Are they not all servant spirits sent out to serve those who are going to receive a share in salvation?”¹⁰¹ Further, he cites *Romans* 8.19–21: “For creation waits eagerly for the revelation of the sons of God. Creation has, namely, been submitted to vanity, not voluntarily, but because of him who submitted it, but with the hope that also the creation will be delivered from the slavery of vanity into the freedom of glory of the children of God.”¹⁰² Cosmas claims that the apostle here names the angels ‘creation’ and

⁹⁹ *Dan.* 10.13 and *Josh.* 5.13–15.

¹⁰⁰ *Luke* 1.18–20, *2Kings* 24.15, *4Kings* 19.35, *Is.* 19. 5–6, *Psalms* 33.8, *Psalms* 90.11.

¹⁰¹ *Hebr.* 1.14 Οὐχὶ πάντες εἰσὶ λειτουργικὰ πνεύματα εἰς διακονίαν ἀποστελλόμενα διὰ τοὺς μέλλοντας κληρονομεῖν σωτηρίαν;

¹⁰² *Rom.* 8.19–21 Ἡ γὰρ ἀποκαταδοκία τῆς κτίσεως τὴν ἀποκάλυψιν τῶν υἱῶν τοῦ θεοῦ ἀπεκδέχεται. Τῇ γὰρ ματαιότητι ἡ κτίσις ὑπετάγη, οὐχ ἑκούσα, ἀλλὰ διὰ τὸν ὑποτάξαντα, ἐπ’ ἐλπίδι ὅτι καὶ αὐτὴ ἡ κτίσις ἐλευθερωθήσεται ἀπὸ τῆς δουλείας τῆς φθορᾶς εἰς τὴν ἐλευθερίαν τῆς δόξης τῶν τέκνων τοῦ θεοῦ.

the humans ‘the sons of God’. ‘To wait eagerly’ (ἀποκαραδοκία) means, according to Cosmas, to raise the head in order to see at a distance and to hope for something which is useful for men. It might be useful to mention, in order to understand Cosmas’ explanation, that a word for head, κάρα, is a part of the word for ‘eager expectation’ (ἀποκαραδοκία) used in *Hebrews* 1.14.

In II.83, Cosmas puts forward a theory that is very important to him and his understanding of the order in universe.¹⁰³ This theory shows forth his firm belief that angels put the celestial bodies in movement. It is no circular movement of the heaven that produces the movements of the celestial bodies, but angels fulfilling their service of man.

4.7.3 A bond of friendship between angels and men

In II.86 Cosmas takes up another theme which is important to him. He believes that the angels are bound to men by a bond of friendship.¹⁰⁴ When Adam sinned and got his sentence of death, the angels regretted it. Further, they did not count on a hope for the world as man, being the image of God, is the bond between God and creation. They felt despair about themselves and about the entire universe and lost their willingness to serve men. In II.90 Cosmas tells us that, when Jesus, the second Adam, was born, the angels recovered their courage and their happiness. When, later on, Jesus was subjected to temptations from the devil but succeeded to withstand, the angels rejoiced even more. In II.92 Cosmas goes on to tell us about how the angels rejoiced together with men at the resurrection of the Lord and in V.74 he cites *Ephesians* 3.10: “In order that God’s multifarious power now may be known to the dominions and authorities by the mediation of the Church.”¹⁰⁵ Thereby he makes clear that he is of the opinion that the angels share in the life of the Church and that they are educated by this attendance. This was no unusual opinion in Cosmas’ time and in many congregations the people stood up during the prayer out of respect for the presence of the angels.¹⁰⁶ This, however, must mean that the angels are thought to be present on the earth.

¹⁰³ Also in II.84, 97, 103, III.5, 32, IV.15a, IX.3, 13–14, 16, 19, 25 Cosmas stresses the same view about the angels.

¹⁰⁴ The conceptions of a bond of friendship between angels and men and that the angels are bound to the destiny of men are found in Theodore’s doctrines. See Sachay (1869) 5, 10, 15, 18 and Swete (1880–1882) 128–130, 267–271.

¹⁰⁵ *Eph.* 3.10 Ἴνα γνωρισθῆ νῦν ταῖς ἀρχαῖς καὶ ταῖς ἐξουσίαις διὰ τῆς ἐκκλησίας ἡ πολυποίκιλος τοῦ θεοῦ σοφία.

¹⁰⁶ Stuhlfauth (1897) 29–30.

Philoponus gives a beautiful description in *De Opificio Mundi* I.19, 49.3–26, of how he looks upon the divine service: “We humans have holy houses, churches, separated from all that is trivial and profane. In these houses we reach out our hand and speak to God in our prayers as if he were present. Reaching out their hands and eyes towards heaven helps the simple souls to separate themselves from all that belongs to the earth and lifts their spirit to God, as most of them cannot imagine the supra-mundane reality. Rightly they say that the servants of God are in Heaven, standing by the side of God and with starting-point from our conditions, they can imagine the divine in a more corporeal way which is useful for many.” Philoponus’ view on the divine service differs from that of Cosmas’ in this manner. When Cosmas imagines angels and men worshipping God together in the earthly church, Philoponus regards the earthly church as a place, where men can be lifted in their spirit to contemplate incorporeal and spiritual realities. When Philoponus gives his consent to the notion that the angels are in heaven, standing by the side of God, this seems to me to be an excuse before the congregation in Alexandria. As we have seen, Philoponus himself is of the firm conviction that the angels are incorporeal and therefore unable to be in a place, neither within nor outside the heaven (οὐδὲ ἐντὸς εἶναι ἢ ἐκτὸς τοῦ οὐρανοῦ) and he has taken much pain to explain that only body (σῶμα) can be in a place. Therefore he seems to contradict himself here in I.19, and put the angels in the heavenly place, a measure he takes, as I see it, in order not to get into conflict with the Church.

4.8 Summary

Cosmas and Philoponus have different views on the angels. Still angels are true realities for both of them. Cosmas sees the angels as corporeal beings and, even if they are created from a very fine material, they are existing within heaven and earth. Therefore it is quite possible for us humans to see them with our earthly eyes. Cosmas also sees the angels as servants of men and, besides, they are bound under much the same conditions as we humans are. Consequently, they will not reach the Kingdom of God until the Last Day, when all humans will rise from the dead. Only then, the angels will be delivered from their service on behalf of man. One important thing that Cosmas charges the angels with is, that they have to move the celestial bodies until the Last Day. The angels perform this duty out of great responsibility for the benefit of men and will not be delivered from this their duty until man is delivered from this present condition and enters into the second condition, the Kingdom of Heaven. This thought is

repulsive to Philoponus and fills him with sneer, since Philoponus sees the angels as servants of God. In their service of God, they can both help and punish humans, and their power is limitless as is their nature. If, in Cosmas' view, the angels could be seen by our earthly eyes, this is not the case to Philoponus. Philoponus assures that angels can only be contemplated by the pure mind.

Cosmas' view seems 'normal' for his time and for the circle of pious people in which he moved. But why do angels get such a prominent place in Philoponus' work and why does he deal with them in such a considerable detail as he actually does? The answer to this must be found in the kind of *work as such* Philoponus made here in *De Opificio Mundi*. This was his first theological work of any considerable length and he had to fit in the angels, that were 'matter-of-fact' beings to people in general and to Cosmas in particular, into his own world of natural science. He gets himself into trouble now and then with the Bible passages. When, e.g., in I.18 he cites a number of passages and declares that they must be understood metaphorically and not literally, he does so, in my opinion, in order to disarm Theodore, who might have good ground for his standpoints in the same passages.

Moreover, Philoponus and Theodore accuse each other of not being able to bring forward adequate Bible passages. This illustrates the fact that the doctrine about angels is not displayed in detail in the Bible. Further, in this treatise on the angels which Philoponus puts forward here in the first book of *De Opificio Mundi*, he seems to use philosophical technical terms more frequently than in the other books of the work. He also accuses Theodore of not understanding these terms. This should be quite natural, if we consider the fact that a Greek philosopher or scientist, when in need of a technical term, usually took a word from the ordinary Greek language and gave it a special meaning. When this word was used in its general meaning, in the ordinary language, by ordinary people, a misunderstanding could rise if the philosopher pretended not to realize that the ordinary Greek used the word in its general meaning. Is this what happens between Philoponus and Theodore? How could Cosmas understand, e.g., the word for place, τόπος, as three-dimensional extension? The same must be valid for a number of other expressions like νοερός, νοητός, λογικός, αίσθητός, etc. On the whole, when Philoponus and Theodore argue and interpret their respective views on the angels, they seem to talk at cross-purposes even more than they do when they treat other subjects. The reason for this could be that Philoponus is ahead of his time, but also that he feels more at home with philosophical reasoning than with theology.

5 Spherical versus rectangular world

5.1 Introduction

In this chapter I intend to treat Philoponus' arguments for a spherical heaven and a spherical earth and Cosmas' arguments for an oblong and flat earth and a rectangular, vaulted heaven attached to it. Further, I intend to show how Philoponus argues for the opinion that the heaven rotates, while Cosmas maintains that the heaven stands immovable. To this end, I choose to use *Isaiah* 40.22 "He rules over the earthly round and those who live on it appear as grasshoppers; he erects the heaven as a vault and spreads it out as a tent to live in"¹ as a kind of motto for this chapter. Both Philoponus and Cosmas use Bible passages as important proofs of their respective views about the shape and the construction of the universe, and *Isaiah* 40.22 is a passage to which they return repeatedly.

5.2 The shape and rotation of heaven

5.2.1 Proof from observation (Philoponus)

The heading of III.9 in *De Opificio Mundi*² announces that the chapter will offer several proofs of the heaven being a rotating sphere, and that the validity of these proofs can be perceived by the senses. The very fact that Philoponus here appeals to the senses and bases his arguments upon practical experiments, which anyone could carry out, shows that he has adjusted his arguments to the standard of his opponent Cosmas and, for that matter, probably to the standard

¹ ὁ κατέχων τὸν γῦρον τῆς γῆς, καὶ οἱ ἐνοικοῦντες ἐν αὐτῇ ὡς ἀκρίδες, ὁ στήσας ὡς καμάραν τὸν οὐρανὸν καὶ διατείνας αὐτὸν ὡς σκηνὴν κατοικεῖν.

² It is not clear whether or not Philoponus himself has composed the headings of the different chapters in *De Opificio*. However that may be, the headings cover very well the contents of the chapters.

of the majority of the Christians in sixth-century Alexandria as well, when it came to science. Greek philosophers and scientists employed quite different arguments to prove the sphericity of the heavens.³

Philoponus opens the chapter by inviting the reader to make the following practical experiment: He recommends you to take your stand in a high place immediately after sunset on a clear but moonless night and watch the sky above you—the sky, that Isaiah, most fittingly, called a ‘vault’.⁴ Then you should make a note of what stars are situated near the eastern horizon, near the western horizon and in the middle of the sky, respectively. If you go out again and gaze at the sky shortly before dawn, you will not see the same starry sky as the one you saw in the evening, except for the Great and Little Bears and a few other constellations in their neighbourhood. The stars, which you saw in the evening near the eastern horizon, you will now, just before daybreak, see near the western horizon, and stars other than those you saw in the evening will now appear in the eastern part of the sky.

But what happened to those stars that filled the hemisphere above earth in the evening, Philoponus asks, if they are not gone beneath the earth together with the hemisphere that holds them? He answers his own rhetorical question by mockingly pointing out an absurd consequence that must follow from his opponents’ position: If the hemisphere with the stars visible in the evening has not moved to a position beneath the earth, one must suppose that the individual stars have left their allotted locations and been accumulated in a disorderly mass somewhere else. But Philoponus’ opponents are not saved by such an explanation, for, since in their ignorance they believe that the extremities of the heavenly vault rests on the earth’s surface (τῆ γῆ ἐπίκειται) and that there exists no space outside the world, they will not be able to find any location that would have room for all those disappearing stars.⁵ Philoponus concludes that the ob-

³ Cf., e. g., Aristotle, *De Caelo* 286b10–287b21 (the sphericity of the heavens) and *ibid.* 297a8–b17 (the sphericity of the earth). Cf. also Ptolemy, *Almagest* I.3–7.

⁴ III.9, 127.7–8 ὅπερ Ἡσαΐας ὁ προφήτης καμάραν ἔφη συμφώνως τῷ πράγματι. The passage refers to *Isaiah* 40.22, which Philoponus quotes here as ὁ στήσας τὸν οὐρανὸν ὡσεὶ καμάραν. The *LXX* text, as we know it, is quoted above, n. 1.

⁵ In Reichardt’s edition (128.3) there is a full stop after ... χωρῆσαι αὐτοὺς δυναμένους, and the following Εἰ γε κατὰ τὴν ἄγνοιάν τινων ... starts a new paragraph. The clause Εἰ γε κατὰ τὴν ἄγνοιάν τινων τὰ ἄκρα τοῦ οὐρανοῦ τῆ γῆ ἐπίκειται καὶ ἔξω τοῦ παντὸς ἐπ’ ἀληθείας τόπος ἐστὶν οὐδεὶς is supposed to be the protasis of an apodosis that starts with δῆλον οὖν ὡς ... (128.5). However, this way of structuring the two sentences is mistaken. From a syntactical point of view, the asyndeton with Εἰ γε κατὰ τὴν ἄγνοιάν τινων is awkward; even if some similar asyndeta occur in comparable texts of this period, there is no reason to introduce them when they can be avoided. As for the content, it is reasonable to

servations show that the hemisphere that was visible in the evening is situated beneath earth in the morning and that another hemisphere of the same size but filled with other stars has taken its place; these two hemispheres form one continuous, rotating sphere that completes its orbit in one day and one night.

5.2.2 Cosmas' vault-shaped heaven

In *Topography* IV.4 Cosmas cites *Isaiah* 40.22 ὁ στήσας ὡς καμάραν τὸν οὐρανὸν καὶ διατείνας αὐτὸν ὡς σκηνὴν κατοικεῖν and says that the first heaven, that was created on the first day together with the earth, has the shape of a vault. Thus, he attributes the first line of *Isaiah* 40.22 “erecting the heaven as a vault” to the first heaven. The next phrase, “spreading *it*⁶ out as a tent to live in”, he attributes to the second heaven, the one that was created on the second day and is commonly designated as ‘the firmament’ (στερέωμα). Cosmas is compelled to this interpretation of *Isaiah* 40.22 as the first participle phrase explicitly speaks about a vault, while the second phrase speaks about a tent in which to live. Now, humans undoubtedly live on earth, so the second participle phrase must refer to the space below the firmament in Cosmas’ two-storied universe. Following normal rules for textual interpretation, you arrive at a result other than Cosmas’. The two participle phrases must refer to the same thing, whether you read αὐτόν in the second phrase or not. Philoponus, on his part,

suppose that the argument that is based on the non-existence, in the universe of Philoponus’ opponents, of a heavenly τόπος beside the visible hemisphere should include also the words τόπος ἐστὶν οὐδεῖς. The asyndeton is avoided and the argument continues down to those crucial words if we punctuate the passage 127.22–128.8 in this way: τί οὖν γεγόνασιν ἐκεῖνοι οἱ τότε τὸ ὑπὲρ τὴν γῆν ἡμισφαίριον πληροῦντες, εἰ μὴ ὑπὸ γῆν ἅμα ἡμισφαιρίῳ τῷ περιέχοντι αὐτοὺς γεγόνασιν; οὐ γὰρ δὴ τὴν τάξιν, ἣν πρὸς ἀλλήλους εἶχον, συγχέαντες εἰς μίαν, οὐκ οἶδα ὅπη, σωρείαν ἠθροίσθησαν ἄτακτον, οὐδὲ τόπου ὄντος οὐδαμοῦ ἑτέρου χωρῆσαι αὐτοὺς δυναμένου, εἴ γε κατὰ τὴν ἀγνοίαν τινων τὰ ἄκρα τοῦ οὐρανοῦ τῇ γῆ ἐπίκειται καὶ ἔξω τοῦ παντὸς ἐπ’ ἀληθείας τόπος ἐστὶν οὐδεῖς. Δῆλον οὖν, ὡς ἐκεῖνο μὲν τὸ ἐσπέρας ὁρώμενον ἡμισφαίριον γέγονεν ὑπὸ γῆν, ἕτερον δὲ ἴσον ἐκείνῳ ἑτέρων πεπληρωμένον ἀστέρων καὶ αὐτὸ τὸν ὑπὲρ γῆν τόπον κατείληφεν. With this punctuation, the εἴ γε clause states the reason why Philoponus’ opponents cannot claim that there exists a place to which the disappearing stars might betake themselves when they leave the heaven above earth; on this quasi-causal use of εἴ γε, cf. Kühner–Gerth 1904, 2.178. With Δῆλον οὖν Philoponus returns to the experiment described in 127.4–21 and states the conclusion that is to be drawn from the astronomical observations.

⁶ αὐτόν ‘it’ is missing in *LXX* but both Cosmas and Philoponus as well as Severian have it in their quotations of the Bible passage in question.

considers the two participle phrases to refer to the firmament, and he also uses the passage to show his opponents' misinterpretation.⁷

Cosmas' objections against the sphericity of heaven and its rotation are based on Bible passages that state, either that the heaven has extremities, or that it is fixed to the earth.

In IV.5 he claims that the Bible passages mentioning the extremities of heaven and earth cannot be understood as referring to a sphere. He cites *Isaiah* 42.5 "Thus speaks the Lord, who has created the heaven and fixed it."⁸ He also cites from *Hebrews* 8.2 "the true tent, which is fixed by the Lord, not by a man."⁹ As Cosmas believes that the upper part of the heaven, i.e. the space between the firmament and the first heaven, is the place where God lives, it seems consistent that he here in IV.5 says that the two cited Bible passages both confirm that the heaven stands fixed to the earth, and that it does not perform any circular movement. For this firm view of his, he also takes *Job* 38.37–38¹⁰ as a support in this context, and in II.18 he explains his understanding of that passage, claiming that the facts that the heaven inclines towards the earth and that it is joined together with the earth, clearly show that the heaven is joined by its extremities to the extremities of the earth. Inclining the heaven and gluing it to the earth are ideas incompatible with the conception of heaven as a sphere, Cosmas states.

In X.31 Cosmas uses an extract from book III of the *Hexaemeron* of Severian of Gabala in order to show that God did not make a revolving sphere when he created the heaven, but made it in the shape of a vault and stretched it out as a tent. According to Cosmas, Severian considers it as impiety and unbelief not to give heed to the words of the prophets, which tell us that the heaven has a beginning and an end. Severian also states, Cosmas says, that the prophets tell us, when it comes to the sun, that it goes out—not that it rises; cf. *Genesis* 19.23 "the sun went out upon the earth."¹¹ Severian also refers to *Psalms* 18.7, which says that the 'exit' (ἔξοδος) of the sun takes place at the extreme end of the heaven and that the goal (κατάντημα) of its movement is at the other extreme

⁷ Cf. *De Opf.M.* III.10, 131.33.

⁸ οὕτως λέγει κύριος ὁ θεὸς ὁ ποιήσας τὸν οὐρανὸν καὶ πῆξας αὐτόν.

⁹ τῆς σκηνῆς τῆς ἀληθινῆς, ἣν ἔπηξεν ὁ κύριος, οὐκ ἄνθρωπος.

¹⁰ Οὐρανὸν δὲ εἰς γῆν ἔκλινε, κέχυται δὲ ὡσπερ γῆ κοίτα· κεκόλληκα δὲ αὐτὸν ὡσπερ λίθον κύβον. When Cosmas quotes this passage (II.18, IV.5, VII.85), he always cites the two last words as λίθον κύβον. They appear as λίθω κύβον in *LXX* (with the v.l. κύβον λίθους) and Philoponus.

¹¹ ὁ ἥλιος ἐξῆλθεν ἐπὶ τὴν γῆν.

end.¹² But if the heaven is spherical, it has no end, and this cannot be in accordance with true facts, Severian states, according to Cosmas, and, in order to show that the word ‘end’ or ‘extreme’ (ἄκρον) is used about the heaven in that crucial context as well, Severian quotes as evidence *Matthew* 24.30–32 “... the Son of man arriving on the clouds of the sky with great power and glory; he will send his angels with a great trumpet, and they will summon his chosen ones from the four quarters, from one end of the heaven to the other.”¹³

In X.32–33 Cosmas’ quotation from Severian touches the subject of the sun’s location during the night. First Severian makes the point that ‘the outsiders’, those who do not have the right faith,¹⁴ believe that the sun is under the earth during the night. He starts with the confident assertion that the universe has the likeness of the tabernacle, or rather *is* a tabernacle. To say ‘the sun is going down’ seems to be no more than a phrase to Severian, while the correct thing to say, according to him, would be something like “the sun has started its journey through the northern regions.”

The text quoted from Severian in X.33 belongs to a sermon that he had once delivered in a church. In this particular sermon, the church represents an image of the world, and, when Severian mentioned the points of the compass, we must imagine that he, at the same time, actually pointed at the four walls of the church. We know that churches are oriented towards the east where the sun rises and Severian most probably wanted his audience to imagine the vault of the church to be the vault of the heaven and further to imagine the course of the sun between rising and setting. The sun will not, according to Severian, and of course according to Cosmas, go down under the earth, but will travel through the northerly regions as if hidden by a wall, as the waters on top of the firmament will not permit the course of the sun to be visible. After having travelled through the northerly region, the sun travels back to the east. For this view Severian supports himself on *Ecclesiastes* 1.5 “and the sun rises and the sun sets and draws back to its own place.”¹⁵

It is quite obvious that both Cosmas and Severian but also Philoponus appeal to the senses of their respective audiences. They draw their arguments from the

¹² ἀπ’ ἄκρου τοῦ οὐρανοῦ ἢ ἔξοδος αὐτοῦ, καὶ τὸ κατάντημα αὐτοῦ ἕως ἄκρου τοῦ οὐρανοῦ.

¹³ ... τὸν υἱὸν τοῦ ἀνθρώπου ἐρχόμενον ἐπὶ τῶν νεφελῶν τοῦ οὐρανοῦ μετὰ δυνάμεως καὶ δόξης πολλῆς· καὶ ἀποστελεῖ τοὺς ἀγγέλους αὐτοῦ μετὰ σάλπιγγος μεγάλης, καὶ ἐπισυνάξουσιν τοὺς ἐκλεκτοὺς αὐτοῦ ἐκ τῶν τεσσάρων ἀνέμων ἀπ’ ἄκρων οὐρανῶν ἕως ἄκρων αὐτῶν.

¹⁴ Presumably, albeit a Christian, Philoponus is included, at least in Cosmas’ view.

¹⁵ καὶ ἀνατέλλει ὁ ἥλιος καὶ δύνει ὁ ἥλιος καὶ εἰς τὸν τόπον αὐτοῦ ἔλκει.

concrete reality that surrounds them. Severian uses the very church building, in which the congregation is gathered to listen to his sermon, in order to explain the course of the sun and the other celestial bodies in the firmament. Most probably, Severian stretches out his hand pointing at different directions while he makes his explanations, thereby making his points still more clear and vivid. Philoponus, on the other hand, urges his audience to actually go out and observe the firmament for themselves. He seems convinced that, if they do so, they will certainly understand his explanations and realize that he is right.

5.2.3 The evidence of the zodiac

The next argument of Philoponus' is based on observation of the zodiac during one night. Actually, it is only a variation of the preceding one (*De Opificio Mundi* III.9, 127.4–128.12) and follows immediately after it in his text (128.13–129.8). Here, Philoponus takes pains to go into particulars about how the different signs of the zodiac succeed each other in the evening sky. The twelve signs create together one circle which is called the zodiac. You will see the whole circle during one single night, for six signs set and six others rise. Hence, the spherical shape of the celestial body is clearly demonstrated by the zodiac, that cuts heaven into two halves. And Philoponus stresses that to see all this, all you need is your own eyes and an alert watchfulness.

It is somewhat disconcerting that Philoponus' first two proofs for the sphericity of heaven should be so similar to each other. Both are based on the fact that stars that are visible during one part of the night must be somewhere else during the rest of the time. That has already been demonstrated with reference to the whole of the sky, and there seems to be little point in repeating what is substantially the same argument with reference to the zodiac only. But Philoponus has a reason. In his opponent Cosmas' universe the zodiac is singled out, for Cosmas claims that the zodiac moves in a circle (κύκλος) of its own, beneath the firmament.¹⁶ Therefore, Philoponus must prove that the zodiac moves in the same way as the other fixed stars and that the stars that make up the twelve signs are attached to the same sphere as the other stars. This is one instance where Philoponus' choice of arguments seems to have been influenced by his opponents' strange ideas.

It would be incorrect to claim that Cosmas was not interested in observing the sky the way Philoponus recommends. But, at the same time, there are no doubts about the fact that he prefers studying the Bible to being engaged in

¹⁶ Cf. *Topogr.* IX.6, with Cosmas' drawing which shows his view of the zodiac.

gazing at the stars. In *Topography* IX.1–14 he talks about astronomical issues and describes the orbits of the twelve months, the sun and the moon. The orbit of the twelve months is the uppermost, he says, next comes the orbit of the sun and the lowest is that of the moon.¹⁷ He is very anxious to declare that he refuses to accept scientific astronomy. Such things as risings, settings, parallaxes, phases and the like he declares himself ready to assign to scholars and philosophers. He claims, however, that the eclipses of the sun as well as those of the moon occur in accordance with ‘his’ shape of the universe, which is not spherical but has the shape of an oblong building. In II.103 he goes even further and claims that eclipses could not occur if the shape of the universe were not oblong.

Cosmas also claims that the heaven does not move at all from east to west, nor the reverse. The heaven stands still and is by no means a sphere. Philoponus’ explanation of the way the both hemispheres—and with them the stars—move during one day and night is hereby refuted.¹⁸

5.2.4 The evidence of eclipses

In *De Opificio Mundi* III.9, 129.9–131.8 Philoponus offers a third proof of the sphericity of the world. He invokes the evidence of eclipses. Actually, it is only the lunar eclipse that delivers the proof Philoponus wants to give; the point of his argument is that, when a lunar eclipse occurs, the sun must be located beneath the earth, which is not the case at a solar eclipse. Still he starts with a detailed description of the solar eclipse. Philoponus might keep the two together and explain both of them without giving it much thought, since Cosmas always seems to mention the two together. In this case, too, Philoponus’ argumentation may have been influenced by that of his opponent.

In *Topography* III.67 Cosmas names a number of famous philosophers by name and states that they have not been able to predict the resurrection from the dead and the Kingdom of God, although that is of greatest importance to mankind. “At the very most”, Cosmas says, “if they keep to the truth, they can predict the solar and lunar eclipses; even if no use for the world will come out of it, still they cannot cause any harm.” Thus, Cosmas’ linking together of solar and lunar eclipses provides a likely explanation of the fact that Philoponus discusses

¹⁷ Ὁ κύκλος τῶν δεκαδύο μηνῶν ἀνώτερος ὑπάρχων, καὶ τούτου κατώτερος ὁ τοῦ ἡλίου, καὶ τούτου πάλιν κατώτερος ὁ τῆς σελήνης.

¹⁸ As I have shown in chapter 4, Cosmas’ belief is that angels move the celestial bodies and the stars.

them both together in this context, although he must have known that only the lunar eclipse offers the proof he needed for heaven's sphericity. As will appear from the following accounts, Philoponus' description of the two types of eclipses is very detailed, not to say circumstantial. The readers he had in mind were evidently not very well informed in astronomical matters but educated enough to follow his sometimes rather complicated argumentation.

When a solar eclipse occurs, Philoponus states, that phenomenon is not a matter of the light abandoning the sun. It is the moon that, situated on the straight line from the earth to the sun, prevents the sunrays from reaching us.¹⁹ The moon is close to the earth and big enough to cause deep darkness.²⁰ Philoponus also points out that the moon does not have any light of its own but reflects the sunlight as a kind of mirror and sends it on to the earth. That part of the moon, which is turned towards the sun, is always illuminated. After the conjunction its western part is illuminated and after full moon its eastern part is illuminated. When the moon stands diametrically opposite the sun, the whole part of it that is turned towards earth is illuminated.²¹

It is quite obvious, Philoponus continues, that the night is nothing but the shadow cast by the earth when the sun is under it. The shadow cast by the earth reaches beyond the lunar sphere, which is further below, i.e. nearer to the earth, than all other celestial spheres. When the moon is diametrically opposite the sun and fully illuminated by it, and if the moon is positioned precisely on the circle which passes through the centre of the signs of the zodiac and which the sun always follows, not deviating either to the north or to the south, then all three bodies, moon, earth, and sun, will be on the same straight line. The shadow of the earth will then fall precisely on the moon and, as a consequence, it will no longer receive any light from the sun; a lunar eclipse will take place. The reason why eclipses do not occur every month is that, normally, the moon will be a little distance to the north or to the south of the solar circle. Anyway, the eclipse will last until the conical shadow has passed and the moon can receive the sunbeams again.²²

If a lunar eclipse takes place at midnight, when the moon is at its culmination, a straight line may be drawn from it right through the centre of the earth until it reaches the sun. So, if the moon is in the centre of the sky above the earth, the sun must be in the centre of the sky under the earth on a straight line from the moon right through the earth. From this Philoponus concludes that the

¹⁹ *De Opf.M.* III.9, 129.10–14.

²⁰ *Ibid.* 129.16–19.

²¹ *Ibid.* 129.26–130.9.

²² *Ibid.* 130.19–28.

part of the sky that is above the earth is of the same size as the part that is under the earth, and the heaven as a whole is a spherical body consisting of two hemispheres.²³

We may compare this Philoponus' elegant explanation and proof of the heaven's spherical shape with *Topography* VI.3, in order to illustrate the incongruity of the two opponents. In VI.3, Cosmas tells us about a most pious abbot, named Stephanus. This man was the most perfect Christian, an honest man and thoroughly trained in calculations regarding the moon. Moreover, this man made his calculations in accordance with the shape of the universe which Cosmas could agree to and which he considered to be in accordance with the Bible. This man was requested by a scholar named Anastasius to predict the solar eclipse in the month of Thot of the present tenth indiction period. Stephanus actually could predict that eclipse, including a lunar eclipse in the month of Mesore, much to Anastasius' astonishment and admiration.

This digression illustrates Cosmas' eagerness to show that it was possible, in the highest degree, to predict eclipses also with his biblical world view, provided that the predictor was both competent and pious. In III.67–68 he compares Christian science to profane science. He depreciates the profane science and states that, even if scientists know how to predict solar and lunar eclipses, this is of no use to the world. Even if they keep silent about their achievements in this field, no harm will follow from it, as ordinary people are well acquainted with these natural phenomena.

5.2.5 The evidence of Bible passages

5.2.5.1 *Isaiah 40.22*

In the next chapter (III.10), Philoponus turns to a different type of argumentation; he begins to support himself on Bible passages. It is a way of arguing that his opponent Cosmas prefers. Already in the heading of the chapter Philoponus states that the Bible passages in question are those that Theodore of Mopsuestia had quoted in support of views that were similar to those of Cosmas. Philoponus, on his part, intends to show that those passages actually prove the opposite of what Theodore and Cosmas think.

In *De Opificio Mundi* III.10, 131.13–132.11 Philoponus argues that the Bible supports his conviction that the celestial body is spherical. He states that the biblical quotation that Theodore of Mopsuestia and his disciples present in order

²³ *Ibid.* 130.28–131.12.

to show that there must be another shape of the universe than the spherical one, in fact is a proof of the opposite and of the true fact. The Bible passage in question is, again, *Isaiah* 40.22, the latter part of which is quoted by Philoponus: “He erects the heaven as a vault and spreads it out like a tent to live in.”²⁴ Philoponus maintains that the prophet here has given us a clear description of the hemisphere that is visible above the earth, and names that hemisphere *καμάρα* (‘vault’), for that is the way to describe those circular shapes that do not complete a full circle. It is indeed the half of a sphere that is above the earth, not the half of a cylinder, an ovoid or an object of any other shape. When objects of such shapes are cut in two lengthways, the halves will be confined by straight lines²⁵ and their length will be greater than their breadth.

It is proved that the earth is in the middle of everything and constitutes the centre of the universe. Therefore it does not incline one way or another but remains at the same distance from the four cardinal points, in the east, west, north, and south, respectively. Thus, if a straight line, the length of which is equal to the distance from earth to one of those points, is turned around with earth as its pivotal point, it will run through all the cardinal points and generate a circle, which is the limit of the heaven above the earth, dividing it from the heaven under the earth. Consequently, the heaven itself, the limit of which is the circumscribed circle, is of necessity a hemisphere and nothing else, and its corresponding hemisphere is under the earth. Philoponus concludes that the prophet Isaiah, when he, in order to provide full knowledge about God, pointed at phenomena which were quite visible to all, proved that the heavenly body is spherical. Still the prophet had no intention whatsoever to teach astronomy. In *Topography* II.17 Cosmas uses *Isaiah* 40.22 to put forward his understanding of the construction of the world. He understands the universe to be a kind of building with a rectangular ground-plan and roofed with a vault. When he reads the passage “He erects the heaven as a vault”, he understands it to mean that God, “after creating an oblong (*ἐπιμήκη*), rectangular earth” and “after he had

²⁴ ὁ στήσας τὸν οὐρανὸν ὡσεὶ καμάραν καὶ διατείνας αὐτὸν ὡς σκητὴν κατοικεῖν.

²⁵ The halves of an ovoid are not confined by straight lines. Does Philoponus make a mistake here? Or should we read *κωνοειδοῦς* instead of *ῥοειδοῦς* in III.10, 132.8? Neither solution recommends itself. Philoponus is not prone to making mistakes and *κωνοειδοῦς* is not likely to have been miswritten into *ῥοειδοῦς*. For discussions on ovoid and/or conical universes cf. Aristotle, *De Caelo* 287a19–22, Epicurus *ap.* Diogenes Laertius 10.74, Ps.-Plutarch, *Placita Philosophorum* 886c–d, Ps.-Alexander of Aphrodisias, *Problemata* 3.20, Simplicius, *In Arist. Cael.* 409–413, Olympiodorus, *In Platonis Alcibiadem* 16.

laid the foundations of earth on its own stability”²⁶ fixed the extremities of the heaven to the extremities of the earth. Having placed the extremities of heaven at the bottom (κάτωθεν) at the four corners of the earth,²⁷ he shaped, at the top (ἄνωθεν) at a very great height (ὑψηλότατα πάνυ), a vault, which rested on vertical walls standing along the length of the earth (ἐπὶ τὸ μῆκος τῆς γῆς).²⁸ At the short sides of the earth (εἰς πλάτος τῆς γῆς) he joined the extremities of heaven with walls (τειχίσας), thus creating a closed space that, according to Cosmas, is similar to a ‘vault-like’, oblong *tholos* (θόλου καμαροειδοῦς ἐπιμήκους).

Above we have seen Philoponus’ interpretation of this Bible passage, by which he adjusted it to fit in with his world view. But to fully understand Cosmas’ interpretation of *Isaiah* 40.22 it is also useful to read his comments on *Exodus* 26, which we find to a large extent in Book V of the *Topography*.²⁹

Philoponus, as we have seen above, claims that the prophet Isaiah, however unintentionally, still has proved that the universe is spherical. To this end, Philoponus (III.10, 133.1–10) cites the latter part of *Isaiah* 40.22 (διατείνας αὐτὸν ὡσπερ σκηνὴν κατοικεῖν) and says that also this passage is in accordance with the nature of things. He observes that tents, for the most part, are circular on the outside and that they have the ground below for floor. At the top, the tents are shaped in such a way that the prophet found it fitting to compare them to the appearance of the cosmos. Philoponus cites *Psalms* 103.2 (ὁ ἐκτείνων τὸν οὐρανὸν ὡσεὶ δέρριν) and tells us that tents used to be covered all around with hides and that the same also should be valid for Moses’ tabernacle.

Cosmas uses the same passages to demonstrate that his view of cosmos must be the true one. In *Topography* VII.84³⁰ he makes it clear that he understands the latter part of *Isaiah* 40.22 as well as *Psalms* 103.2 to refer to the firmament.

In the following sections of III.10 (133.11–134.20) Philoponus discusses a couple of Bible passages that are treated by Cosmas as well.³¹ Although differ-

²⁶ θεμελιώσας τοῖνυν ὁ θεὸς τὴν γῆν ἐπὶ τὴν αὐτῆς ἀσφάλειαν, an adaptation of *Psalms* 103.5, that Cosmas had quoted and discussed at II.12–16.

²⁷ This is the gist of Cosmas’ ἐκ τεσσάρων μερῶν (literally ‘from four directions’).

²⁸ Cosmas expresses himself very concisely here and does not explicitly refer to the vertical walls on which the vault rests. However, a vault at a very great height not resting on something would be inconceivable in Cosmas’ universe.

²⁹ In V.19 Cosmas starts to tell how Moses was kept on Mount Sinai in order to learn how God had created the universe. In chapters 20–44, he makes a detailed description of how the tabernacle was built and what things were kept in the tabernacle. He also makes a cosmological as well as a christological interpretation of the tabernacle symbolism.

³⁰ Cf. II.17, 21 and IV.4.

ing in details, their interpretations of those passages are in agreement on the main issue: The passages are intended to illustrate the unchangeability of heaven as contrasted to the unstable conditions that dominate on earth.

5.2.5.2 *Ecclesiastes* 1.2–7

In III.10, 135.2–17 Philoponus turns to a passage, viz. *Ecclesiastes* 1.2–7, the interpretation of which has caused considerable disagreement between him and his opponents. He quotes the passage in full: “Futilities’ futility, everything is futility. What is the surplus of all his toil for the man who toils under the sun? Generations come and generations pass away but the earth stands forever. And the sun rises and the sun sets and draws to its own place. When it has risen there, it marches towards the south and then moves in a circle towards the north, it turns round and round. The wind blows and the wind returns upon its own circles. All the winter-streams flow into the sea, but the sea does not get filled; the winter-streams return to the place they flowed from to flow again.”³²

Philoponus is fully aware (135.12–17) that those who read that Bible passage, will find reason to point out that *Ecclesiastes* did not mention that the sun travels under the earth between sunset and sunrise. Rather, the passage might be interpreted to mean that the sun, having left the southern regions where it is visible during the day, will “circle towards the northern parts” (κυκλεῖν ἐπὶ τὰ βόρεια) during the night until it reaches the region of sunrise again. Thus, the phrase κυκλοῖ πρὸς βορρᾶν of the *Ecclesiastes* passage is highly relevant for Philoponus’ opponents, since it implies that, during the night, the sun will be positioned to the north of us, hidden by, e.g., high mountains, just as it is positioned to the south during the day.

Philoponus therefore feels compelled to give a thorough interpretation of the passage. Whereas Cosmas quotes only verse 6,³³ the only verse that refers to astronomical phenomena, Philoponus starts by citing the whole passage (the

³¹ The passages in question are *Isaiah* 51.6, treated by Cosmas in *Topogr.* X.26, and *Psalms* 101.27, treated in *Topogr.* VII.63. Philoponus in addition discusses *Isaiah* 34.4.

³² Μатаιότης ματαιότητων, τὰ πάντα ματαιότης. τίς περισσεία τῷ ἀνθρώπῳ ἐν παντὶ μόχθῳ αὐτοῦ, ᾧ μόχθει ὑπὸ τὸν ἥλιον; γενεὰ ἔρχεται καὶ γενεὰ πορεύεται καὶ ἡ γῆ εἰς τὸν αἰῶνα ἔστηκεν. καὶ ἀνατέλλει ὁ ἥλιος καὶ δύνει ὁ ἥλιος καὶ εἰς τὸν τόπον αὐτοῦ ἔλκει. ἀνατέλλων αὐτὸς ἐκεῖ πορεύεται πρὸς νότον καὶ κυκλοῖ πρὸς βορρᾶν, κυκλοῖ κυκλῶν· πορεύεται τὸ πνεῦμα καὶ ἐπὶ κύκλους αὐτοῦ ἐπιστρέφει τὸ πνεῦμα. πάντες οἱ χεῖμαρροι πορεύονται εἰς τὴν θάλασσαν καὶ ἡ θάλασσα οὐκ ἔσται ἐμπιπλαμένη. εἰς τὸν τόπον οὗ οἱ χεῖμαρροι πορεύονται, ἐκεῖ αὐτοὶ ἐπιστρέψουσι τοῦ πορευθῆναι. The Greek text is cited from *De Opificio*.

³³ And in an abbreviated form at that; cf. below.

verses 2–7). The reason is that he, above all, intends to show that Solomon, the alleged author of the *Ecclesiastes*, did not intend to write a physics manual but aimed at moral teaching.³⁴ The main theme of the book is the futility of human strivings, as contrasted to the stability of nature. The individual will toil to change his lot, to ameliorate his position, but of no avail. The world will continue its course, as it always did. According to Philoponus, the aim of the verses under discussion is to illustrate the never-changing course of natural processes, including the conditions under which mankind live. To that end the verses list a number of natural phenomena that repeat themselves with great regularity, viz., the development of the embryo through infancy, childhood and youth into a man who will beget a new generation of humans,³⁵ the yearly cycle of seasons,³⁶ the ever-changing directions of the winds,³⁷ and the circulation of water between earth and atmosphere,³⁸ concluding that survey by citing Solomon’s assertion that nothing is new under the sun,³⁹ which, in his view, proves that Solomon’s goal was moral teaching and nothing else.

Only then, after demonstrating the overall moralistic character of the *Ecclesiastes*, Philoponus enters upon his interpretation of the crucial verse 6. First he remarks that the sun’s movements are used by Solomon to illustrate the same periodicity or eternal return as the other natural phenomena discussed so far. What does the phrase ‘the sun rises’ actually mean, he asks. ‘Ανατέλλειν ‘rise’ must of course refer to a movement from below upwards (κάτωθεν ἄνω).⁴⁰

³⁴ 135.20–21 ἠθικώτερον τῷ Σολομῶντι τὸ βιβλίον, οὐ φυσικῶς διεσκεύασται τοῦτο.

³⁵ 136.4–6; cf. γενεὰ ἔρχεται καὶ γενεὰ πορεύεται in the *Ecclesiastes* passage.

³⁶ 136.6–7, probably referring to the sun’s annual movement, to which both Cosmas and Philoponus find an allusion in v. 6; Philoponus will return to that point (138.11–139.4).

³⁷ 139.8–13; cf. πορεύεται τὸ πνεῦμα κτλ. Philoponus’ idea seems to be that, by, say, a north wind, air is transported to the south and will then return towards the north when a south wind starts blowing.

³⁸ 136.14–28; cf. πάντες οἱ χεῖμαρροι πορεύονται κτλ. Philoponus gives a comprehensive and scientifically correct description of how rain from the clouds gives rise to rivers, which transport the water to the sea, from where it is vaporised into the clouds again.

³⁹ 136.28–137.5; cf. *Eccl.* 1.9–10.

⁴⁰ 137.6–9. The text should be structured in this way: τί δέ ἐστι τὸ ἀνατέλλειν τὸν ἥλιον; ἢ τὸ κάτωθεν ἄνω φέρεσθαι, οἷόν ἐστι καὶ τό· “ἀνέτειλεν ὁ ἥλιος καὶ συνηχθησαν”; “What does ‘the sun rises’ mean? To move from below upwards, as in ‘The sun rose, and they gathered’?”. The method of answering a question with an immediately following question introduced by ἢ (or ἢ, as it is often written) and containing a suggested answer to the first question, is known already from Homer and becomes frequent in philosophical literature from Plato onwards (cf. Denniston 1954, 283; abundant examples are to be found, e.g., in Ps.-Aristotle’s *Problemata*).

Thus, the Bible uses a word about the rising of the sun that clearly refers to a vertical movement.

Having established that, Philoponus turns from the textual authority of the Bible to arguments based on the observation of nature. The visible phenomena appearing at sunrise are a consequence of the sun's vertical movement, he claims.⁴¹ Before any part of the sun has yet risen above the horizon, its light is visible for some time and it gradually becomes stronger. This is consistent with the idea that the sun is coming nearer to the horizon (πλησιάζει τούτῳ), for the same phenomenon occurs with torches: the nearer they come to us, the stronger their light appears to be.

This argument, which is based on the observation that the apparent intensity of light varies with its distance from the observer, is, strictly speaking, relevant in the context only if Cosmas and his adherents had claimed that the sun, during its daily revolution, was always at the same distance from the observers in the inhabited world. Such a claim had never been made by them, as far as I know, but Philoponus' insistence on the sun's gradually diminishing distance and its consequences may indicate that the idea of the sun moving in a horizontal circle also included the claim that its distance never changed. There is nothing in Cosmas that precludes such an interpretation.

However, should that interpretation prove too speculative,⁴² the gradual increase of the intensity of the light before the sun becomes actually visible can be interpreted also as a proof that the sun is nearing the horizon from below and that its orbit for that reason cannot be a horizontal one. But the decisive proof is offered by what happens when the sun starts to become visible at the horizon. This is reminiscent of a classic proof of the earth's sphericity: a ship coming in from the high sea does not show itself all at once but by portions. Philoponus is clearly aware of the importance of that proof, for he describes the process in almost tedious detail: "When the sun appears above the eastern horizon, the whole of its circle does not show at once, but first a small piece, then perhaps a third of it, then more than that, then half of it, then two thirds, and then at last the whole of it appears above the earth."⁴³ This provides evident proof that the

⁴¹ 137.10–21.

⁴² Philoponus *De Opf.M.* 139.4–7 τὸ γὰρ ἀπ' ἀνατολῆς εὐθείαν ἐπὶ δύσιν φέρεσθαι κακέλθην τὴν εὐθείαν κλωμένην διὰ τῶν βορείων ὑποστρέφειν εἰς ἀνατολήν, κύκλος οὐκ ἔστι implies that, according to his opponents, the sun did not move in a circle at all but along straight lines.

⁴³ 137.15–19 ὅταν δὲ τὸν ἀνατολικὸν ὁ ἥλιος ὑπερκύψει ὀρίζοντα, οὐχ ὅλος ἅμα φαίνεται ὁ κύκλος αὐτοῦ, ἀλλὰ πρῶτον βραχὺ τι μέρος, εἶτα φέρε τὸ τρίτον, εἶτα τούτου μείζον, εἶτα τὸ ἡμισυ, εἶτα τὸ δίμοιρον, εἶθ' ὕστερον ὅλος ὑπερκύπτει τῆς γῆς.

sun performs a vertical movement at sunrise and that it has completed a semi-circular movement beneath the earth during the night together with the hemisphere to which it belongs. The importance of the proof in the context where Philoponus uses it is due to the fact that anyone could make the observations required; hence his detailed presentation of it.

The next sentence in the *Ecclesiastes* passage contains the phrase πορεύεται πρὸς νότον καὶ κυκλοῖ πρὸς βορρᾶν “[the sun] travels to the south and circles to the north.” That very phrase was used by Cosmas and his followers to prove that the sun was travelling to the north of the inhabited world during the night, not beneath the earth. Philoponus avoids the difficulties presented by these words by interpreting them as referring, not to the daily orbit of the sun, but to its annual movements between the tropics. ‘North’ and ‘south’ are consequently interpreted as designations of the sun’s apparent motions on the sky towards the latitudes of the summer and winter solstices, respectively.⁴⁴ That interpretation hardly stands scrutiny, and Philoponus does not make his case stronger by stating, incorrectly, that the equator intersects the zodiac at the points of the solstices.⁴⁵ Concluding this section, Philoponus points out that the words κυκλοῖ κυκλῶν of the *Ecclesiastes* passage presuppose a circular movement, whereas his opponents’ idea of the sun moving along straight lines back and forth excludes moving in a circle.⁴⁶

In the same chapter Philoponus has dismissed the hypothesis of his antagonists, according to which the sun, on its way back to the east through the northerly parts, is hidden by huge mountains, as something to laugh at.⁴⁷ Still more absurd he finds the hypothesis that the sun during the night is outside the heaven and travels back to the east hidden by the back of the heaven. That is an absurd supposition since the heaven is the most transparent body of all and the sun illuminates everything within it!⁴⁸

Cosmas’ interpretation of *Ecclesiastes* 1.5–6 in *Topography* II.34, which Philoponus finds ridiculous, runs: The sun travels from the east and passes the

⁴⁴ Cosmas, too, is of the opinion that Solomon refers to the sun’s annual motion in this passage but he interprets ‘north’ and ‘south’ in a different way from Philoponus.

⁴⁵ 138.15–19 ὁ γὰρ ἰσημερινός ... κατὰ δύο σημεῖα τὸν ζῳδιακὸν τέμνει, κατὰ τε τὴν τοῦ καρκίνου ἀρχὴν ... καὶ κατὰ τὴν τοῦ αἰγοκέρωτος.

⁴⁶ 139.3–7 καὶ τὸ ‘κυκλοῖ κυκλῶν’ ἐδήλωσεν· τὸ γὰρ ἀπ’ ἀνατολῆς εὐθείαν ἐπὶ δύσιν φέρεσθαι κάκειθεν τὴν εὐθείαν κλωμένην διὰ τῶν βορείων ὑποστρέφειν εἰς ἀνατολήν, κύκλος οὐκ ἔστι.

⁴⁷ *De Opf.M.* III.10, 138.3–10. Cf. *Topogr.* II.34.

⁴⁸ *De Opf.M.* III.10, 139.8–12. Cf. Cosmas’ quotation from Severian in *Topogr.* X.32.

southern parts through the air. It travels high and emits its light towards the north over the whole of the inhabited earth. The elevation of the earth in the north and the west intercepts the light and makes night beyond this earth, alongside the Ocean and in corresponding areas on the earth beyond the Ocean. Later, when the sun advances towards west under the elevation of the earth, it travels above the Ocean through the northerly areas. It makes night here until, completing its circle, it comes back to the east. Then it rises again towards the southern part and illuminates this inhabited earth.

In order to corroborate his position, Cosmas cites *Ecclesiastes* 1.5–6 and claims that by the word πνεῦμα, which is commonly understood as ‘wind’, Solomon in this context refers to the air. That proves, according to Cosmas, that the sun’s movements take place in the air; the sun is not attached to the firmament as Philoponus and others claim. That applies not only to the sun’s daily motion from east to west and back again, by which day and night are caused, but also to its annual movement between the tropics. For by saying κυκλοῖ κυκλῶν ἐπὶ κύκλους αὐτοῦ ἐπιστρέφει,⁴⁹ Solomon also referred to the solstices, Cosmas asserts. The alleged proof is that the plural κύκλους refer to the two tropical circles, not to the sun’s daily travel which is only one circle. Also, the words κυκλοῖ κυκλῶν must refer to the sun, and Cosmas takes that as an indication that also in the following clause, καὶ ἐπὶ κύκλους αὐτοῦ ἐπιστρέφει τὸ πνεῦμα, the sun is the grammatical subject. How he would explain τὸ πνεῦμα in that clause never becomes clear; he even omits the word when he quotes the phrase a second time in II.35.

Both Cosmas and Philoponus seem to consider that *Ecclesiastes* 1.6 refers to two movements of the sun—the daily movement and the annual one. They also agree that the daily movement is dealt with first and the annual movement thereafter. But they do not agree as to where in the text Solomon passes from the daily movement to the annual. Philoponus means that already ἀνατέλλων αὐτὸς ἐκεῖ πορεύεται πρὸς νότον καὶ κυκλοῖ πρὸς βορρᾶν deals with the annual movement. Cosmas considers this clause to refer to the daily movement and assures that the annual movement is dealt with only in κυκλοῖ κυκλῶν. Philoponus connects κυκλοῖ κυκλῶν to the preceding phrase and means that the

⁴⁹ Whenever Cosmas quotes this passage (II.34, IV.11, V.33, IX.12), he omits the phrase πορεύεται τὸ πνεῦμα that *LXX* (and, of course, Philoponus) has after κυκλοῖ κυκλῶν. But Cosmas did read the words πορεύεται τὸ πνεῦμα somewhere in his Bible, for he cites them disconnected from the rest of the *Ecclesiastes* passage in IX.12: τοῦτο γὰρ λέγει ‘πορεύεται τὸ πνεῦμα’, ὡσανεὶ ἐν τῷ ἀέρι. The wording shows that Cosmas took τὸ πνεῦμα to be what we would call an internal accusative, synonymous with ἐν τῷ ἀέρι, supposing ὁ ἥλιος to be the subject of πορεύεται.

following clause πορεύεται τὸ πνεῦμα κτλ. does not refer to the sun at all, but to the wind. Cosmas omits πορεύεται τὸ πνεῦμα from his quotation and connects κυκλοῖ κυκλῶν with ἐπὶ κύκλους αὐτοῦ ἐπιστρέφει (τὸ πνεῦμα) thus making one sentence. By doing this, he means to make the sun the grammatical subject of ἐπιστρέφει. He interprets κύκλους αὐτοῦ as being the tropics and gets thereby a reference to the annual movement of the sun that would otherwise be missing. This seems important to him. Further, there seems to be an acknowledged fact that *Ecclesiastes* refers to both movements of the sun and Cosmas feels himself committed to this. As he does not want ἀνατέλλων κτλ. to refer to the daily movement, he has to interpret the rest the way he does.

His eccentric way of treating grammatical and textual phenomena shows that Cosmas has taken great pains here to make the Bible passage agree with his views on the natural physical laws. It seems to be very important to him that observable facts should be in accordance with what is written in the Bible. In this particular context he does indeed treat *Ecclesiastes* as a book of physics and seems absolutely convinced that Solomon's intention had been to teach physics, not ethics. By that conviction he has put himself in opposition to Philoponus who, as we have seen above, considers Solomon's intention with the book to be a guide into ethics.

In IV.10 Cosmas has made a drawing in order to explain astronomical phenomena, and in IV.11 he explains how, on this drawing, he has marked out the height of the middle of the earth as well as the heights along the northern and the western parts. With this drawing he claims to have succeeded in proving, among other things, how days and nights arise. He cites *Ecclesiastes* 1.5–6 and says that this passage proves the reliability of the Bible, when it shows how the sun returns to its place, completing a circular movement through the air (τὸν ἀέρα κυκλεύων). This Cosmas' drawing reminds us of the fact that Cosmas seems to have made a genuine effort to work scientifically.

When Cosmas quotes the same Bible passage again in V.33 he uses it to explain the cosmological symbolism of the lamp-stand in the tabernacle. The lamp-stand was placed to the south of the table.⁵⁰ Since Solomon, i.e. the alleged author of *Ecclesiastes*, states (*Ecclesiastes* 1.5) that the sun travels towards south, the lamp-stand should, according to Cosmas, be interpreted as a symbol of the heavenly lights. For 'heavenly lights' Cosmas uses the word φωστῆρες⁵¹ in the plural, so he probably connects the lamps of the lamp-stand with more celestial bodies and not only with the sun to which the *Ecclesiastes*

⁵⁰ Cf. *Ex.* 26.35, 40.24.

⁵¹ That word is used several times in the Bible with reference to the celestial bodies (*Gen.* 1.14, 1.16, *Sapientia* 13.2, *Psalmi Salomonis* 18.10, *Daniel* 12.3, *Philippians* 2.15).

passage refers. The seven lamps could, of course, be seen as symbols of the seven planets known to the ancients, but in V.33 Cosmas interprets them as symbols of the seven days of the week. Anyway, since *Ecclesiastes* speaks only of the sun but Cosmas uses the plural φωστῆρες, he reads more into the passage than there actually is.

In IX.11–12, however, when he cites the passage once more, he brings the planets into the symbolism. He states that Moses in a mysterious way has placed seven lamps on the lamp-stand in the tabernacle, in order to symbolise the seven celestial bodies that are named planets. In IX.12 he then claims that Solomon had got his wisdom from the same Holy Spirit as Moses. Therefore Solomon expresses the same thing as Moses, when he says that the sun rises from the east and runs towards the south.

5.3 The stability of the universe

In his efforts to prove the sphericity of the universe, Philoponus cannot avoid touching upon the question concerning the stability of the universe, a question of great importance. As an introduction to this particular problem, Philoponus states that he intends to examine the meaning of the word of God in *Job* 38.37–38. By an ingenious, if somewhat bold, interpretation, Philoponus turns that passage into a confirmation of the sphericity of the earth. He also uses it to demonstrate the stability of the universe.⁵² The passage runs as follows: “Who is counting the clouds with wisdom, who is it that inclined heaven to earth? It has been poured out like earth dust, I have glued it as a cube on to a stone.”⁵³ That passage is awkward for Philoponus, of course, since it may be interpreted as ascribing a cubical shape to the universe. He solves his problem by discussing the passage in two steps. First, he argues that the passage shows that heaven surrounds earth on all sides, then he deals with the embarrassing cubical shape.

First, he shows that he is aware of what his critics might say about the line οὐρανὸν δὲ εἰς γῆν ἔκλινεν, viz., that the heaven is attached to the earth by its extremities and that it does not encircle the earth. But that interpretation is contradicted by one of the following lines of the Bible passage which runs: κεκόλληκα δὲ αὐτόν, ὡσπερ λίθω κύβον and which, according to Philoponus, describes the relation of earth to heaven as that of an object inscribed into a geometrical form. The point of the comparison is the relationship between the

⁵² *De Opf.M.* III.10, 139.13–141.12.

⁵³ τίς δὲ ὁ ἀριθμῶν νέφη σοφία, οὐρανὸν δὲ εἰς γῆν ἔκλινεν; κέχεται δὲ ὡσπερ γῆ κοῖα, κεκόλληκα δὲ αὐτόν, ὡσπερ λίθω κύβον.

inscribed object and the form circumscribing it, not the shape of the two items or of one of them. He argues that κύβος ‘cube’ is to be understood as a geometrical term for a body, just like κῶνος ‘cone’ and σφαῖρα ‘sphere’. A geometrical body, which is circumscribed around another one, encloses the inscribed body on all sides. Therefore, if God glued the heaven to the earth, it is obvious, Philoponus states, that the heaven surrounds the earth *on all its sides*.⁵⁴ Further, if heaven inclines towards the earth from all sides, this also explains the line κέχυται δὲ ὡσπερ γῆ κοιλία, for everything must have been poured out from all sides all over the earth. Then Philoponus gives his opinion that Job uses the cube as an example, as the cubical shape is the most stable shape of all, and the cube can stand stable and immobile, and he also refers to Plato, who assigned the cubical shape to the earth because of its immobility.⁵⁵

Further, referring to *Ecclesiastes* 1.4 “The earth stands in eternity”,⁵⁶ he makes it clear that the heaven which surrounds the earth cannot as a whole move to another location, for, if it moved in such a way, it also must make the earth change its position, which is impossible. For if the sphere by help of its movement also makes its centre—in other words, the earth—move, the whole universe would change its position, and its revolving would not be a circular movement. But the heaven stands still although in constant movement, for it moves in a circle but never changes its place since its centre is immobile. Philoponus, further, stresses that no one ever understood the heaven to have a cubical shape—and it could not possibly be a cube, since it has no support—instead the Bible passage associates the geometric cube with the earth, for the same reason as Plato assigned the cube to the earth, viz. because of its stability and not because of its shape.

Already in *Topography* I.16 Cosmas objects to the thought that the heaven stands still although in constant rotating movement. He has noticed, perhaps by making observations, that objects in the material world which move on the spot, either are equipped with pivots attached to the object itself and rotating on bearings fitted into a fixed object, or else are pierced by an axis that does not rotate itself.⁵⁷ But, on a cosmological level, Cosmas cannot find any object that could support the bearings of heaven, nor can he find an axis through the heaven. It should also be pointed out that Cosmas takes it for granted that the heaven cannot be suspended in a void, but needs a solid object on which to rest.

⁵⁴ The key word πανταχόθεν (‘from all sides’) is repeated four times in the text.

⁵⁵ Cf. Plato, *Timaeus* 55 DE.

⁵⁶ ἡ δὲ γῆ εἰς τὸν αἰῶνα ἔστηκεν.

⁵⁷ What precisely the objects are that the terms τόριος, ὀργανικὴ σφαῖρα and μηχανή refer to is uncertain.

Referring to *Job* 26.7, he is, however, as we have seen above, willing to accept that the earth needs no support.

In *Topography* VII.85 Cosmas quotes the latter part of the Bible passage (*Job* 38.38) and makes a point of κεκόλληκα δὲ αὐτὸν ὡσπερ λίθῳ κύβον. His brief explanation σημαίνων ὅτι ... κεκόλληται ὡς κύβος κάτωθεν ὡσανεὶ τετραγώνος is not too clear, but seems to mean that the lower part (κάτωθεν) of heaven must be like a cube, i.e. have four sides, if it is to be glued to the rectangular earth. Cosmas' treatment of this passage really gives proof of his literal interpretation of the Bible. The same can be said about the way in which he interprets *Job* 26.7 “[He who] hangs the earth on nothing”,⁵⁸ which amounts to saying, according to Cosmas, that it has nothing below itself on which to rest. He also uses *Job* 38.6 “to what are her rings fixed?”⁵⁹ and leads you to think of Moses' tabernacle and how it was fitted together.⁶⁰ Finally, he maintains that you can read in *Psalms* 103.5 that God has founded the earth on its own stability. Therefore we must understand that it really is founded on itself and not on anything else.

Among alleged biblical evidence against the sphericity of heaven Philoponus also in *De Opificio Mundi* III.10, 141.2–7 briefly considers *Psalms* 18.7; the same passage has been mentioned above, when we discussed the use Severian of Gabala made of it.⁶¹ This passage runs “Its (i.e., the sun's) way out is from an extremity of heaven and its goal is at an extremity of heaven.”⁶² To use that passage as evidence against the sphericity of heaven is foolish (ψυχρόν), Philoponus frankly declares. For when his opponents say that a sphere cannot have an extremity, they do not understand that the Bible passage refers to the eastern and western horizons. For surely the psalm extols what is visible, not what is invisible and under the earth. Then Philoponus cites as counter-evidence *1 Esdras* 4.34: “The earth is large, the heaven is high and the sun is swift in its course. It turns around in the circle of heaven and in one single day it comes back to its circle.”⁶³ That passage also refers to the daily motion of the sun and, since the Greek text has the word for ‘circle’ (κύκλος) twice, it clearly presumes

⁵⁸ κρεμῶν τὴν γῆν ἐπ' οὐδενός. Cosmas treats *Job* 26.7 in II.12, IV.6, VII.86.

⁵⁹ ἐπὶ τίνος οἱ κρίκοι αὐτῆς πεπήγασιν;

⁶⁰ Cf. V.23, where Cosmas makes a detailed description of the tabernacle and its construction.

⁶¹ Cf. Severian's interpretation in *Topogr.* X.31, accounted for above.

⁶² ἀπ' ἄκρου τοῦ οὐρανοῦ ἢ ἔξοδος αὐτοῦ, καὶ τὸ κατάντημα αὐτοῦ ἕως ἄκρου τοῦ οὐρανοῦ.

⁶³ μεγάλη ἡ γῆ καὶ ὑψηλὸς ὁ οὐρανὸς καὶ ταχὺς τῷ δρόμῳ ὁ ἥλιος καὶ στρέφεται ἐν τῷ κύκλῳ τοῦ οὐρανοῦ καὶ ἐν μιᾷ ἡμέρᾳ εἰς τὸν κύκλον αὐτοῦ ἔρχεται.

that the heaven is spherical and that the movement of the sun is circular. The passage from *1 Esdras* is not discussed by Cosmas.

5.4 The shape and position of the earth

So far we have mainly discussed Cosmas' and Philoponus' treatment of such passages as have been adduced as evidence about the heaven and have been claimed to prove either that it is spherical or that it is formed as a vault with a rectangular ground-plan.

We shall now turn to the discussion regarding the shape of the earth. According to the heading of chapter four in book II of *De Opificio Mundi*, it is possible to find support both from Moses, Isaiah and Job for the view that earth is spherical in shape. Moses tells us in the first chapter of *Genesis* that the earth was covered by water and that no single part of it was uncovered. This means, according to Philoponus (II.4, 66.8–67.4), that it is obvious that also the water that covered the earth must have appeared in the same spherical shape as the earth.

The earth is situated in the middle of the universe, and, at the same time, it constitutes the very centre of the universe. Had it not been spherical, it would not have been covered all over by water, but those parts that did not incline towards the centre, would have been totally uncovered. Only on a spherical shape will weights placed all around it incline exactly towards the centre. If you imagine any other shape of the earth, the water could not possibly have stayed all over it. This means also that the covering water had been shaped in the same spherical shape as the earth right from the beginning and that the water in every part of the earth inclines towards the centre, in order not to slip away from the earth. But if water from all sides did not completely cover the earth, Moses would be a liar when he says that the earth was invisible until the water had been gathered together. Even now the entire earth is not visible, for many of its parts are still covered by water.

Regarding *Isaiah* 40.22 ὁ κατέχων τὸν γῦρον τῆς γῆς, mentioned in II.4, 67.7, Philoponus understands the word γῦρον as a reference to the sphericity of the earth. Further, Philoponus claims that what is said in *Job* 26.7, “He hangs the earth upon nothing”,⁶⁴ cannot be ‘saved’⁶⁵ unless the earth is supposed to be of spherical shape, constituting the centre of the universe. If all heavy things

⁶⁴ κρεμάζων γῆν ἐπὶ μηδενός.

⁶⁵ The expression ‘save the phenomena’ was coined by Plato. Astronomical observations and data you derived from them had to be fitted into a geometrical pattern. If the observations did not fit into a geometrical pattern, they could not be saved, i.e. they were unreliable.

move only towards the centre of the universe, the stability and immobility of the earth cannot be maintained, unless every part of it is striving towards the centre.

Philoponus now enters the subject regarding the earth's position in the universe. This is a matter of great importance to him, as it concerns his geocentric worldview. Cosmas refutes him as their respective opinions of the matter differ widely.

In III.10, 132.12–15 Philoponus says that it has *been proved* that the earth is in the middle of everything and occupies the centre of the universe. This is the reason why it does not lean against anything. In III.7, 123.9–25 he says the same thing, supporting himself again on *Job* 26.7–8 but quoting more of it this time: “He who stretches out the north wind (Boreas) on nothing and suspends the earth on nothing, he who binds water in his clouds.”⁶⁶ The earth is placed in the middle position, Philoponus says here, and to that place all weights are carried according to nature. He also points out that there is nothing lower than the middle.

In *Topography* I.17–19 Cosmas attacks Philoponus' view. He points out that it is impossible for the same thing to be both middle and base at the same time. The middle must be in the middle between height and base or in the middle between right and left in Cosmas' view. He therefore accuses his opponents of inconsistency, and with Cosmas' world-view—the heavy earth at the bottom and the heaven attached to it—it is quite understandable that Philoponus' earth, situated in the middle of the universe, seemed to have an unnatural position.

Cosmas continues his attack in I.19. He asks how it comes that humans and all other creatures dwelling on this earth are not compressed, standing immobile together with the earth, but are able to move through the air, walking, flying or bouncing. The reason for this question seems to be that Cosmas considers it impossible that the air could force its way uniformly from all sides, thereby making the earth stand still. He assumes that, if the earth rested in the centre of the universe, it would be held in that position by the air. But if air were solid enough to keep the heavy earth floating in it, its solidity would prevent objects on the earth's surface from moving around; they would also be kept in one and the same position by the air. Since air obviously is not that solid, the idea of an earth floating in air must be wrong, according to Cosmas. Here Cosmas uses his everyday knowledge to object to such an opinion. He can see for himself that even tiny objects like feathers can cut the air. Obviously, he has failed to understand—or chosen to misunderstand—his opponents' explanation of the earth's central position.

⁶⁶ ἐκτείνων βορέαν ἐπ' οὐδέν, κρεμάζων γῆν ἐπὶ μηδενός, δεσμεύων ὕδωρ νεφέλαις αὐτοῦ.

In *De Opificio Mundi* IV.2, however, Philoponus assures, again, that the earth is spherical and that the same was the case with the water that, according to Moses, once covered the whole earth. He repeats his argument that it is only in the spherical shape, when every part of it from all sides inclines towards the centre of the universe, that stability and immobility is given to the earth.

This passage is a summary of what has been said before and serves as an introduction to a discussion about how mountains and valleys came into being. What is interesting about this short passage is that Philoponus, of all arguments he has used to prove the stability and immobility of the earth, repeats *Ecclesiastes* 1.4 as support for his theory. It is obvious, that he has attached great importance to this particular Bible passage. He might have found it particularly suitable as a help to convince his readers.

It was Cosmas' firm belief that Moses' tabernacle as well as the utensils within it were shaped on the pattern of the construction of the universe. He is convinced that the table in the tabernacle is constructed on the pattern of the earth. In *Topography* II.47–48 he gives exact measures of the length and the breadth of the earth. After a lecture on how the length and the breadth respectively should be measured, he comes to the conclusion that the earth is 400 days' marches long and 200 days' marches broad. Then he claims that the Bible is true when it says that the length of the earth is twice its breadth. As a concluding remark he presents a garbled quotation from *Exodus* 25.23⁶⁷ which implies that the measures of the offering table in the tabernacle, two cubits long and one cubit wide, were chosen after the model of the earth (ὡσανεὶ τὴν ὑπογραφὴν τῆς γῆς). Now, if Cosmas means that the surface of the table in the tabernacle corresponds to the surface of the earth, he must have had troubles to explain the floor in the tabernacle and what surface it corresponded to on the earth.

Philoponus was not ignorant about the tabernacle and what it looked like. When he uses the latter part of *Isaiah* 40.22, “spreads it out like a tent to live in”, in order to prove the spherical shape of the world, he stresses that tents for the most part are stretched out in a circle on the outside, and that the tent building, which has the *ground for a floor*, is circular at the bottom part. The upper part, the roof, is constructed in a way that the prophet likened to the cosmos.⁶⁸ But also *Psalms* 103.2, “He who stretches out the heaven as a leathern cover-

⁶⁷ Cosmas writes ποιήσεις γάρ, φησί, τὴν τράπεζαν ὡσανεὶ τὴν ὑπογραφὴν τῆς γῆς μῆκος πηχῶν δύο καὶ πλάτος πήχεως μιᾶς. The *LXX* text as we know it runs: Καὶ ποιήσεις τράπεζαν χρυσοῦ καθαροῦ, δύο πήχεων τὸ μῆκος καὶ πήχεος τὸ εὖρος καὶ πήχεος καὶ ἡμίσεος τὸ ὕψος.

⁶⁸ Cf. *De Opf.M.* III.10, 133.1–9.

ing”,⁶⁹ is in accordance with this, for the tents used to have an outer covering of hides and this was the case also with the Mosaic tabernacle, according to Philoponus.

Also in *De Opificio Mundi* III.6, 120.18–122.18 the question of the sphericity of the earth is discussed. Philoponus points out that Basil of Caesarea, too, admits that the heaven is spherical and rotates in accordance with observable facts and that the earth is the centre of the universe. He quotes from Basil: “Now, after the sun has come into existence, day is the air illuminated by the sun when it shines in the hemisphere above earth. Night is the shadow that is produced when the sun hides itself.”⁷⁰ Philoponus, on his part, finds it obvious that Basil believes that the hemisphere above earth has a counterpart in a hemisphere under the earth and that everything within is enclosed by the circumference of the heaven. Further, Philoponus claims that Basil agrees with the physicists’ doctrine that the earth constitutes the centre of the universe. If the centre of the universe is located at the same distance from the circumference of the heaven in all directions, it must be spherical, for this condition is only prevalent with regard to the spherical shape. Philoponus maintains that the heaven necessarily encircles the earth since the earth stands at an equal distance from every part of the heaven. Consequently, the shape of the earth must be spherical.

In *Topography* III.1 Cosmas talks about the Tower of Babel. When men for the first time came up to such a height, they could observe the stars continually, he claims. But they went astray and got the false impression that the heaven is spherical. Cosmas also states that it was the Chaldeans who made such an awkward discovery, viz., that the heaven is spherical and, as the Chaldeans, issued from Abraham, once went down to Egypt, they transmitted this idea to the Egyptians.⁷¹ The Egyptians, in their turn, were eager to make it their starting-point. Later, when Greek philosophers like Pythagoras, Plato and Eudoxus of Cnidos stayed in Egypt, they learnt about the idea and developed it further. It is quite obvious that Cosmas here has resorted to legends, or perhaps he had read something of those church fathers who had claimed that Greek philosophers

⁶⁹ ὁ ἐκτείνων τὸν οὐρανὸν ὡσεὶ δέρριν.

⁷⁰ *De Opf.M.* 122.3–7 νῦν μὲν λοιπὸν μετὰ τὴν τοῦ ἡλίου γένεσιν ἡμέρα ἐστὶν ὁ ὑπὸ ἡλίου πεφωτισμένος ἀὴρ ἐν τῷ ὑπὲρ γῆν ἡμισφαιρίῳ λάμπουτος. καὶ νύξ σκίασμα γῆς ἀποκρυπτομένου ἡλίου γιγνόμενον.

⁷¹ According to Alexander Polyhistor *ap.* Eusebius, *Praeparatio Evangelica* 9.18.2 τὸν δὲ Ἄβραμον τὴν ἀστρολογικὴν ἐπιστήμην παιδευθέντα πρῶτον μὲν ἐλθεῖν εἰς Φοινίκην καὶ τοὺς Φοίνικας ἀστρολογίαν διδάξαι, ὕστερον δὲ εἰς Αἴγυπτον παραγενέσθαι Abraham transmitted astronomy and astrology to the Phoenicians and the Egyptians. Nothing is mentioned here, however, about the sphericity of the universe.

were dependent on the Hebrews. In any case, he does not seem to have obeyed Philoponus' advice to take a stand on a height and observe the heaven above. Had he done so, he might have come to the same conclusion that he accuses the Chaldeans of in III.5, viz. that, when they came up to the height (in the tower) and saw that some stars rose and other went down, they made the assumption that the heaven is spherical. But, Cosmas adds, they were ignorant about the shape of the earth and about the fact that the stars are moving through the air by the help of angels.

In III.6, Cosmas makes a statement that might be considered as a contradiction on his part. He says that Moses, who was brought up at the Egyptian court, was instructed in Egyptian science. He says that Moses had learnt by *observation*, διὰ τῆς ὀψέως, about the sphere. He had also learnt astronomy, or rather magic and he had learnt the hieroglyphics. Here Cosmas admits that Moses knew about the theory of the spherical shape of the earth, but he takes it for granted that Moses later abandoned this worldview and adopted the 'tabernacle-shaped' one. This becomes clear when in the following chapters, supporting himself on *Genesis*, Cosmas tells about Moses' conversion. He also tells that Moses got his knowledge concerning the actual and real state of things from God. Philoponus, on his part, is convinced that Moses 'kept' his view of a spherical universe.

5.5 Summary

We shall see in the next chapter that Cosmas and Philoponus agree that there are only two heavens, the first heaven, which was created on the first day, and the firmament. Neither of them professes himself to believe in eight spheres like e.g. Plato. But they do not agree about the shape and the movement of the universe. Cosmas adheres to the tabernacle construction of the universe and claims that the heaven as well as the earth are immobile. The movements of the celestial bodies take place in the air below the firmament and are brought about by angels. Philoponus claims that the heavens move in a circular movement and that the earth stands firm in the middle of the universe. He also claims that the celestial bodies are fixed on the firmament and move together with the firmament.⁷² Hence it follows that their respective views on how days and nights come about differ. Cosmas believes that the sun during the night is hidden by a

⁷² However, Philoponus rejects the theory of epicycles; cf. the following chapter.

great height, and Philoponus claims that it is below the earth, together with one of the hemispheres.

In order to prove their respective views the two antagonists mainly use Bible passages. But they also refer to empirical observations and scientific reasoning. Both Cosmas and Philoponus make use of writings of authorities in different fields. Cosmas seems to have a predilection for seeking support for his views from church fathers and teachers of the Church. Philoponus asks his readers to perform practical experiments. I suspect a reciprocal influence here. Cosmas wants to present himself as a learned man, well versed in the Bible. Philoponus, on his part, seems to adjust himself to the standard of knowledge of his antagonist.

6 Heaven

6.1 Introduction

In this chapter I intend to discuss the different views of Cosmas and Philoponus respectively concerning the concept of ‘heaven’, both in the sense of the ‘Kingdom of Heaven’ and as a physical entity. Further, I will discuss the subject about the resurrection of the dead, as this subject is closely connected with their conception of the heavenly region.

First of all, we may observe that there are some issues on which Cosmas and Philoponus agree. Such issues are:

1. The first heaven, ὁ πρῶτος οὐρανός (*Genesis* 1.1), and the firmament, τὸ στερέωμα (*Genesis* 1.6), which also is called οὐρανός, are two different things, but they both exist physically.
2. There are not more than two heavens.
3. Fixed stars as well as planets are situated below the firmament. The planets are not equipped with spheres of their own but are either (according to Philoponus) attached to the revolving firmament or (according to Cosmas) moving freely, without being attached to any sphere at all.
4. Water is an important constituent of the firmament.

It is to be noticed that Philoponus, by embracing the same opinions as Cosmas in these matters, deviates from the leading Greek cosmologists on two important points, viz., (i) the number of spheres and (ii) the substance of the heaven. As a consequence, on certain cosmological and astronomical questions, he must polemize not only against Cosmas but also against the Greek scientists.

The main questions on which Cosmas and Philoponus disagree with regard to heaven are these:

1. Where is the πρῶτος οὐρανός situated and of what does it consist?

2. Where is the στερέωμα situated and of what does it consist?
3. What is the cause of the movements of the stars?
4. What does the Bible intend when it speaks about οὐρανός (including: what does Paul mean by ὁ τρίτος οὐρανός)?¹
5. Does the Kingdom of Heaven exist in space?

Philoponus supports himself on the Bible, but also on actual observations and on knowledge presented by other scientists.

On the first day of the creation God created both heaven and earth, but according to both Cosmas and Philoponus, it is important to remember, that it was the *first* heaven, ὁ πρῶτος οὐρανός, that God created on that first day of the creation. However different views they have regarding the heaven in general, the two combatants agree this much. We should consider, in this context, that Philoponus regarded the universe to be spherical while Cosmas conceived of it as a rectangular building. This fact makes their views differ in every other aspect concerning the heaven.

We will also notice that, even though Philoponus uses passages from the Bible when he wants to prove that ὁ πρῶτος οὐρανός is the first created heaven, situated outermost in the universe, still in his argumentation he is careful to support himself on observations and knowledge presented by representatives of the astronomical science. When we turn to Cosmas, we will notice that he uses a different tactic for his argumentation. He takes his arguments almost exclusively from the Bible, pressing the passages he uses into accordance with his understanding of the world.

6.2 The ‘First Heaven’

6.2.1 Philoponus’ ninth sphere

In *De Opificio Mundi* 1.7, 15.17–16.2 Philoponus points out that certain Greek physicists count on the existence of nine spheres and suppose that the outermost one is void of stars. He claims the two physicists Hipparchus and Ptolemy to be the first to have discovered this sphere. He also claims that they had taken their

¹Cf. *2Cor.* 12.2.

starting-points from Moses.² This ninth sphere is likely to correspond to ὁ πρῶτος οὐρανός of the Bible. Invisible though it is, its existence can still be proved. I therefore suppose that Philoponus considered this ninth sphere to be identical with the ‘first heaven’ that was created together with the earth on the first day of creation. He also mentions that Plato himself as well as other scholars did not know about this ninth sphere, but only counted on eight spheres.³ The sphere next to this starless ninth sphere is the one which *Genesis* names the firmament and on which God placed sun, moon and all the stars.⁴

A starless, hence invisible sphere, however, is not an unproblematic entity. Firstly, it is difficult to prove its existence, since it cannot be observed, secondly, since no function can be ascribed to it, the reason why it was created is obscure. For the proof of the existence of this invisible sphere Philoponus must rely on the Greek astronomers. The problem with motivating its existence is treated in *De Opificio Mundi* III.4, 116.22–117.23. Philoponus is aware that ‘someone’ may reasonably ask what was the reason why God created that sphere.⁵ The discussion that follows refers to other cosmological tenets of astronomers, so ‘someone’ here is likely to refer to Greek astronomers rather than to Philoponus’ Christian detractors.

Philoponus offers no answer to his question. Instead he claims that no answer is possible. In order to show that his inability to provide an answer does not diminish the reliability of the supposition of the invisible sphere’s existence, he points out that astronomers believe in a large number of phenomena the existence of which cannot be motivated rationally. The astronomers cannot explain, e.g., why the heavenly spheres are as many as they are or why sun, moon, planets and stars do not move with the same velocity, nor can they give a reason for the number of the stars, their positions or their variegating colours. For a Chris-

²Ridings (1995). In this thesis Ridings shows that the three Church fathers Clement of Alexandria, Eusebius of Caesarea and Theodoret of Cyrrihus maintain that Greek philosophers and Plato in particular are dependent on Hebrew texts and on Moses. According to Ridings (233), Philoponus too considers Plato to be dependent on Moses. Cf. *De Opf.M.* III.3, 113.25–114.3.

³Cf. Plato, *Timaeus* 38C; Bury (1989) 78. After having talked about the creation of heaven, Plato continues to describe how God created sun, moon and five more planets and placed them in the orbits along which the revolution of the other (heaven) was moving (σώματα δὲ αὐτῶν ἐκάστων ποιήσας ὁ θεὸς ἔθηκεν εἰς τὰς περιφορὰς ἃς ἡ θατέρου περιόδου ἦεν, ἑπτὰ οὐσας ὄντα ἑπτὰ).

⁴*Gen.* 1.6 Καὶ εἶπεν ὁ θεός· Γενηθήτω στερέωμα ἐν μέσῳ τοῦ ὕδατος καὶ ἔστω διαχωρίζον ἀνὰ μέσον ὕδατος καὶ ὕδατος.

⁵*De Opf.M.* 116.22–23 Εἰ δὲ τις αἰτίαν τῆς γενέσεως τοῦ πρώτου ζητοῖν λέγειν ἡμᾶς οὐρανοῦ ...

tian such questions create no dilemma—and here Philoponus suddenly returns to a Christian frame of reference. “We all believe,” he says, “that God made everything good as it should be, not too little, not too much.”⁶ That last argument could not be addressed to a Greek astronomer, who did not believe in the same God as Philoponus, but here he assures his Christian readers of his adherence to a common belief in something that is greater than astronomical science. The chapter ends with a statement that most properly deserves to be characterised as a sophism: “If they [i.e., the astronomers] cannot state a natural cause for what is visible, they should not ask us for the reason of what is invisible.”⁷

Let us now suppose that the ninth sphere is identical with the ‘first heaven’, which was created on the first day. Let us also suppose that it was created out of God’s pure will in the same way as the earth was created on the first day out of God’s pure will. There is a Bible passage that runs: “The heaven’s heaven belongs to the Lord, but the earth he gave to the sons of men.”⁸ This Bible passage means a lot to Philoponus. He uses this passage in III.1, 111.2–3 when he calls attention to the fact that the firmament, which we humans reckon to be the heaven as it is the heaven we can see with our own eyes, is not a repetition of the first heaven. That the firmament is of vital importance to the earth and its inhabitants should not be difficult to realize, and God gave it the *name* heaven when he created it.⁹ The heaven’s heaven, on the other hand, belongs to God, according to *Psalms* 113.24, and man has no reason, or rather no right, to investigate why it has come into being.¹⁰ It is enough to know that it does exist. If now two famous scientists of the past had discovered a sphere farthest out in the universe, Philoponus could count that as scientific evidence for a ‘first heaven’ that likewise is spherical. Philoponus, it is true, was a scientist schooled in philosophy and should therefore have had a rather thorough knowledge of astronomy, but he was also a Christian. In his role as a Christian scholar and debater he must have considered it important to have secured a space for God, a heavenly place or Kingdom of God, in order to reassure the church in Alexandria that he was a true Christian as well as a scientist. Also to this end the Bible pas-

⁶ *De Opf.M.* 117.18–20 ὅτι πάντα καλῶς καὶ ὡς ἔδει πεποίηκεν ὁ θεὸς καὶ οὐδὲν ἐλλείπον ἢ περιττόν, πιστεύομεν ἅπαντες.

⁷ *De Opf.M.* 117.21–22 εἰ οὖν αἰτίαν τῶν φαινομένων εἰπεῖν οὐκ ἔχουσι φυσικὴν, μηδὲ ἡμᾶς τῶν μὴ φαινομένων ἐπερωτάτωσαν αἰτίαν.

⁸ *Psalms* 113.24 ὁ οὐρανὸς τοῦ οὐρανοῦ τῷ κυρίῳ, τὴν δὲ γῆν ἔδωκεν τοῖς υἱοῖς τῶν ἀνθρώπων.

⁹ *De Opf.M.* III.1, 110.24 ὁμωνύμως ἐκέινω καὶ τοῦτον ἐκάλεσεν οὐρανόν.

¹⁰ Cf. *De Opf.M.* III.4, 116.18–20.

sage mentioned above was convenient, for according to the *Septuagint*, the Greek text, by using the expression ‘the heaven’s heaven’, seems to stress that οὐρανός here actually means the ‘first heaven’.¹¹

6.2.2 Cosmas’ vaulted building

In his *Christian Topography* II.6 Cosmas starts his comments by citing *Genesis* 1.1. He recommends us to presume that heaven and earth together compose the content of the universe. The two together (οὐρανὸν ἅμα καὶ γῆν) embrace the world. Cosmas finds a proof for this in *Exodus* 20.11 “For in six days God created the heaven, the earth and everything in them.” Then he cites *Genesis* 2.1 “The heaven, the earth and their whole order were completed” and also *Genesis* 2.4 “This is the book about the creation of heaven and earth.”¹² He cites these passages in order to emphasize that Moses in his story of the creation always mentions the heaven first of all since it is the very first created. In addition, heaven is the outermost limit of the universe.

In III.54, as well, Cosmas cites *Genesis* 1.1. Having made an assurance that Moses had been initiated in the art of writing by God, he further assures that Moses with his own eyes had seen a revelation of the creation. This time Cosmas ascribes it to Moses to have made known, by writing *Genesis*, that the foundation was laid by God when the universe was created, as the foundation of the universe consists, according to Cosmas, of the creation of heaven and earth and all that exists within them. Further, all created things, both those created together with heaven and earth and those created afterwards piece by piece, are within heaven and earth. God began the creation on the first day (with heaven and earth) and ended it on the sixth day. On the seventh day God rested from his work. By then the whole creation had been completed without anything missing in the beautiful harmony of the universe. Then Cosmas cites *Genesis* 2.4 “This book tells about the creation of the whole universe, that which is enclosed within heaven and earth.”¹³ Cosmas claims that Moses considered that passage to be enough to signify all there is within heaven and earth.

¹¹ This Bible passage was well-known to Philoponus and he cites it in III.1, 111.2–4, when he wants to prove that the firmament is not a repetition of the first heaven.

¹² *Ex.* 20.11 Ἐν γὰρ ἕξ ἡμέραις ἐποίησεν ὁ θεὸς τὸν οὐρανὸν καὶ τὴν γῆν καὶ πάντα τὰ ἐν αὐτοῖς, *Gen.* 2.1 Καὶ συνετελέσθη ὁ οὐρανὸς καὶ ἡ γῆ καὶ πᾶς ὁ κόσμος αὐτῶν, *Gen.* 2.4 Αὕτη ἡ βίβλος γενέσεως οὐρανοῦ καὶ γῆς.

¹³ *Gen.* 2.4 Αὕτη ἡ βίβλος διηγείται τὴν γένεσιν τοῦ παντὸς κόσμου, ἧτις περιγράφεται ἐν οὐρανῷ καὶ γῆ.

In III.76 Cosmas refers to *Genesis* 1.1 in his discussion on whether the universe is eternal or not. He objects to that wing of Greek science that considers the world to be eternal. To this end he takes different forms of art, their origins and developments as a proof of the non-eternity of the world. “The world is not eternal,” he says, “but recent in date as also human inventions, arts and branches of science are.”¹⁴ In this chapter Cosmas also enumerates several Greek scientists of extraordinary brilliance in their respective field. In the field of astronomy he mentions Ptolemy, the very astronomer whom Philoponus credits with having discovered the ninth sphere. It is important to notice that Cosmas in no way appeals to any of the scientists to support his conception of the world. He merely states that there has been a development in many fields of human knowledge and of the different sciences. When it comes to heaven and earth and their divinely construction, it is only the word of the Bible that matters.

Cosmas further cites *Genesis* 1.1 when he makes a drawing of the world in IV.1. In the comment he makes to the drawing, he stresses that the vault-shaped heaven is attached to the earth, extremities to extremities (ἄκρα ἄκροῖς). This drawing seems to be a resolute effort on Cosmas’ behalf to prove his conviction that the first heaven (ὁ πρῶτος οὐρανός) is situated outermost in the universe.

Finally, in VII.83, Cosmas cites *Genesis* 1.1 in order to claim that Moses has mentioned heaven and earth together because they are all-embracing just by being together. They were created together on the first day of the creation, the farthest ends of the heaven connected to the farthest ends of the earth.¹⁵ He further stresses that the whole universe, everything that exists, exists within the limits constituted by heaven and earth. To this end Cosmas cites *Genesis* 2.1 “The heaven, the earth and their whole order were completed”, and *Genesis* 2.4 “This is the book about the creation of heaven and earth.” Then he adds his own explanation: “This book tells about the creation of the whole universe, which is enclosed within heaven and earth.”

If now all creatures and things that exist are within heaven and earth, the first heaven and earth that is to say, it becomes quite obvious that, according to Cosmas’ way of thinking, the ‘first heaven’ is no more than an upper limit or, more adequate, an upper roof for his universe which has the shape of a building. But being the upper roof, the very limit of the world, the first heaven must be situated farthest out in the universe, the very thing Cosmas wanted to prove when he cited and in part commented on the Bible passages mentioned above.

¹⁴ οὐκ αἶδιος ὁ κόσμος, ἀλλὰ πρόσφατος, ὥσπερ καὶ αἱ ἐπίνοιαι καὶ αἱ τέχναι καὶ αἱ ἐπιστήμαι τῶν ἀνθρώπων.

¹⁵ *Topogr.* II.17.

6.3 The firmament and what is above it

6.3.1 Cosmas' two-storey building

We can study Cosmas' view of the universe in *Topography* IV.9, where he gives a short, comprehensive picture of his cosmos. Here he says that the firmament is situated in mid-distance between the earth and the 'first heaven' (ὁ πρῶτος οὐρανός) and attached to this first heaven in such a way that it demarcates two spaces, one above the firmament and the other one beneath it. In the latter space, viz. the earthly one, you find the earth itself, the water and the remaining elements, but you also find, and this is important, the stars. These are the constituents of our world, which extends from the earth up to the firmament. It has the earth itself for ground or floor, the first heaven for walls and the firmament for ceiling. From the firmament up to the vault of the 'first heaven' the second space extends. This is the Kingdom of Heaven into which Jesus Christ has risen. It is also into this space that all the righteous people will eventually arrive. This space has the firmament for floor, and the 'first heaven' constitutes its walls and its arch-shaped ceiling. Cosmas seems to reckon it as a fact that the righteous in the future state will dwell in an actual place.

It would not be out of place here to mention Cosmas' view on the tabernacle which Moses, at God's command, built in the wilderness.¹⁶ The tabernacle is a model (μίμησις) of the universe and it also depicts the forms of the universe. Still it is a tabernacle constructed by Moses and nothing but a copy of the other tabernacle, viz., the one which God showed him on Mount Sinai. In *Topography* II.35 we can see exactly what Cosmas considers the tabernacle to be, viz., both an image of, and a model for the universe. Thereby he ascribes a double function to the tabernacle. He also ascribes a double function to the concept of the word τύπος, and we read in III.51: Εἶτα μετὰ ταῦτα προστάπτει αὐτῷ σκηνὴν ἐπιτελέσαι κατὰ τὸν τύπον¹⁷ ὃν ἐώρακει ἐν τῷ ὄρει, ὡσανεὶ τύπον οὖσαν παντὸς τοῦ κόσμου.¹⁸ Accordingly, when Moses by help of a curtain divides the tabernacle into an inner and an outer tabernacle, Cosmas translates this into the cosmic plane by changing the curtain for the firmament. By doing

¹⁶ Cf. *Ex.* 25.8–9.

¹⁷ In this signification of the word Cosmas also uses the synonym παράδειγμα.

¹⁸ That this is a dogma, taught by Theodore of Mopsuestia, which has had great influence on Cosmas is beyond doubt. Cf. Devreesse (1948) 25–27.

so he gets two spaces, one upper and one lower, or as he sometimes prefers to put it, two conditions, this present condition where mankind now dwells and the future condition into which Christ has gone as the first of humans and into which all the righteous will arrive at the resurrection from the dead.

In V.20–21 Cosmas makes another explicit exposition of the tabernacle symbolism. Thereby he makes extensive use of *Hebrews*, especially chapters 8 and 9. Here the author of the letter¹⁹ gives an exposition which does not leave us in doubts from where Cosmas has got his thoughts. But the author of the letter has never said that Christ now actually *is* in the space between the firmament and the first heaven, the space that Cosmas claims to be the future condition, only that Christ has gone in through the greater, more perfect tabernacle that is not made by human hand.²⁰ Cosmas doubtless reads more into these chapters than there actually is. When he reads the two first verses of *Hebrews* 8, “My main point is: this is the kind of high priest we have. He has taken his seat at the right hand of the throne of Majesty in heaven, a minister in the sanctuary, in the true tent set up by the Lord, not by man”,²¹ he takes it for granted that the “throne of Majesty” is above the firmament but below the ‘first heaven’. The same applies to V.207, where he uses *Psalms* 109.1, “The Lord said to my lord: ‘Sit at my right hand, and I shall make your enemies your footstool’”,²² to prove that he speaks the truth, when he puts forward the thesis—which he often does—that Christ has risen to heaven as the first of men. Neither king David nor anybody else has risen to heaven, only that Lord about whom king David speaks in this psalm. Therefore we can conclude that Cosmas also takes it for granted that God must be in this space and that this space to him must be the Kingdom of Heaven.

6.3.2 Philoponus’ sphere of celestial bodies

These convictions of Cosmas’ are not at all shared by Philoponus. In *De Opificio Mundi* I.12, 28.20–31.7 Philoponus censures Theodore and his adherents for

¹⁹ Cosmas believes Paul to be the author.

²⁰ Cf. *Hebr.* 9.11.

²¹ *Hebr.* 8.1–2 κεφάλαιον δὲ ἐπὶ τοῖς λεγομένοις, τοιοῦτον ἔχομεν ἀρχιερέα, ὃς ἐκάθισεν ἐν δεξιᾷ τοῦ θρόνου τῆς μεγαλωσύνης ἐν τοῖς οὐρανοῖς, τῶν ἁγίων λειτουργὸς καὶ τῆς σκηνῆς τῆς ἀληθινῆς ἣν ἔπηξεν ὁ κύριος, οὐκ ἄνθρωπος.

²² *Psalms* 109.1 Εἶπεν ὁ κύριος τῷ κυρίῳ μου· Κάθου ἐκ δεξιῶν μου, ἕως ἂν θῶ τοὺς ἐχθρούς σου ὑποπόδιον τῶν ποδῶν σου.

preaching doctrines for which there is no authority in the text of the Bible.²³ In this context he also puts the question, whoever has disclosed to them that Christ is placed on top of the firmament (I.12, 29.11–14). He also asks what the Bible passages mean that run “Sit at my right hand, and I shall make your enemies your footstool” and “He has taken his seat at the right hand of the throne of Majesty in heaven” (I.12, 29.14–18).²⁴ Philoponus evidently repudiates Cosmas’ belief that Christ should dwell in the space between the firmament and the first heaven. If that was the fact, then God himself should be there too, according to the above-mentioned Bible passages. Philoponus asks here, apparently rather sarcastically, if they perhaps made God descend to the floor which was provided by the upper surface of the firmament.

We know that Cosmas actually believed Christ to dwell in the space above the firmament. He repeatedly argues that Christ, as the first of humans, has ascended into the future condition and in IV.15b he depicts Christ on top of the firmament. Philoponus, on his part, although he in all probability considered both God and Christ to be transcendent, does not deny that Christ after the resurrection ascended to heaven, that is, to the ‘first heaven’. The fact that he uses the Bible passages quoted above to rebuke Theodore and his adherents, Cosmas among others, shows that Philoponus, probably out of consideration for the

²³ A doctrine, accepted by Theodore but refuted by Philoponus (29.19–30.6), concerns the species of that particular tree which in *Genesis* is named ‘the tree of knowledge of good and evil’ (τὸ ξύλον τὸ γνωστὸν καλοῦ καὶ πονηροῦ, as Philoponus quotes the phrase). Theodore and his adherents claim that it was a fig-tree, presumably because the Bible tells that it was fig-leaves Adam and Eve put around themselves when they realized that they were naked. Philoponus rejects this thought as being stupid. It is nowhere actually written that it was figs that the first man and woman ate, which caused them to be driven out from paradise. Likewise is it not written in the Bible, Philoponus claims (30.7–8), that the leathern clothes, put around Adam and his wife by God, actually were made of bark from trees. Nor is it written that it was nine hours in all that Adam and Eve spent in paradise and that it was at the sixth hour their hunger made them eat figs. It is easy to refute such doctrines, Philoponus states, had somebody the time to spare occupying himself with such nonsense (30.8–14). Another doctrine of Theodore’s which causes Philoponus annoyance concerns the devil (30.18–25). If the angels got their existence together with heaven and earth, how comes that the devil only stayed for five days in his own order? Further, if the devil from the very beginning degenerated to evil and envy of men, how come that death, according to the *Book of Wisdom*, came into the world as a consequence of the envy of the devil? Moses has not said a word about these things and Philoponus summarizes (30.25–31.6) that Theodore has made up many similar fantasies in his works. Further, his adherents have no evidences from the Bible for their statements and they are not capable to construct their arguments logically.

²⁴ *Hebr.* 8.1 and *Psalms* 109.1.

congregation in Alexandria, agreed to God's dwelling in the 'first heaven'. If he does not refute *Hebrews* 8.1, he must agree to Christ's dwelling there too.

As we mentioned above, the space above the firmament is the same as the Kingdom of Heaven in Cosmas' view. Even if he does not actually say so, it is natural to believe that he is of the opinion that this space must be filled with air to breathe. Also in Philoponus' view there is a space above the firmament that extends to the starless sphere, the 'first heaven'. This space must be filled with something, as no space can be void.²⁵ Therefore, as both air and water have a moist, fluid and transparent substance, Moses has found it proper to name that substance by the common name water. Philoponus also adds that the substance existing in those places is of course the best conceivable substance, be it water, air or some other liquid.²⁶ This very statement shows, at least in my opinion, that Philoponus does not even give it a thought that this space could be the Kingdom of Heaven or the residence of Christ.

Philoponus begins the third book of *De Opificio Mundi* (109.16 ff.) by citing *Genesis* 1.6–8: “God said: ‘Let there be a firmament in the middle of the waters, in order to separate water from water’, and so it was. God made the firmament, and separated the water under the firmament from the water above the firmament. God called the firmament heaven.”²⁷ In addition to the text from the *Septuagint* Philoponus also quotes these verses from Aquila, Theodotion and Symmachus. All three of them were recognised translators of the Scriptures with a column each in Origen's *Hexapla*. Philoponus probably wanted to present these three translations in order to underline that Theodore's exegesis cannot be defended by them. In the verses 16 and 17 we read further: “God made the two great lights, the greater to govern the day and the lesser to govern the night; he also made the stars. God put these lights in the firmament of heaven to shine on the earth.”²⁸ These verses make it absolutely evident that, when the Bible mentions heaven, it might be the 'first heaven' that is intended, but it can

²⁵ Furley (1991) 49.

²⁶ Cf. *De Opf.M.* III.15, 153.27–154.20.

²⁷ *Gen.* 1.6–8 Καὶ εἶπεν ὁ θεός· γενηθήτω στερέωμα ἐν μέσῳ τοῦ ὕδατος καὶ ἔστω διαχωρίζον ἀνὰ μέσον ὕδατος καὶ ὕδατος· καὶ ἐγένετο οὕτως, καὶ ἐποίησεν ὁ θεὸς τὸ στερέωμα καὶ διεχώρισεν ὁ θεὸς ἀνὰ μέσον τοῦ ὕδατος, ὃ ἦν ὑποκάτω τοῦ στερεώματος καὶ ἀνὰ μέσον τοῦ ὕδατος τοῦ ἐπάνω τοῦ στερεώματος, καὶ ἐκάλεσεν ὁ θεὸς τὸ στερέωμα οὐρανόν.

²⁸ *Gen.* 1.16–17 καὶ ἐποίησεν ὁ θεὸς τοὺς δύο φωστῆρας τοὺς μεγάλους, τὸν φωστῆρα τὸν μέγαν εἰς ἀρχὰς τῆς ἡμέρας καὶ τὸν φωστῆρα τὸν ἐλάσσων εἰς ἀρχὰς τῆς νυκτός, καὶ τοὺς ἀστέρας. καὶ ἔθετο αὐτοὺς ὁ θεὸς ἐν τῷ στερεώματι τοῦ οὐρανοῦ ὥστε φαίνειν ἐπὶ τῆς γῆς.

also be the firmament. Further, it is the standpoint of the Bible that the sun, the moon and all the stars have been placed in the firmament by God.

The firmament is the sphere situated next to the first heaven in Philoponus' view. He also agrees that the celestial bodies are fixed to the firmament. As a Christian he can find a strong support in the Bible for this opinion; as a scientist he seems to support himself on Hipparchus and Ptolemy as well as on the majority of Greek scientists.²⁹

If now the firmament is the sphere situated next to the first heaven in Philoponus' view, this is by no means Cosmas' view. It is certain that he shares Philoponus' view that, according to *Genesis* 1.6–7, the firmament was put in a position so as to separate water from water. But Cosmas imagines the world to be, not spherical, but rectangular. His cosmos is a kind of two-floor building: the firmament constitutes the ceiling of the lower storey as well as the floor of the upper storey.

In *Topography* II.20 Cosmas describes the creation of the firmament as he understood it. Here we are told that God on the second day of creation, with the angels as onlookers, built the firmament or, as he puts it, 'this second visible heaven'. God thereby made use of his own created material since he built the firmament out of water. Cosmas also states that the second heaven is like the first heaven according to its nature, only of a different shape. God cut off the height from the earth up to the first heaven midway. Thereafter he stretched the firmament over the whole space in breadth, thereby accomplishing a kind of ceiling. He tied the firmament to the first heaven after dividing the remaining waters, leaving some above the firmament and some on the earth below the firmament. Thus God made the one space or building into two spaces or buildings, the divine abode above and the earthly dwelling-place below. We can follow both Cosmas' imagination and his interpretation of the Bible text, except, of course, for the notion that the angels were onlookers when the firmament was created. To make a conclusion of this chapter Cosmas quotes *Genesis* 1.8 "God named the firmament heaven"³⁰ but also *Psalms* 103.2–3 "he who stretches the heaven as a tent, he who makes roofs over his upper rooms in the waters."³¹ It is understandable why he quotes this latter passage for it is undoubtedly in accordance with his conception of the world, but, on the other hand, this is not the

²⁹ Cf. *De Opf.M.* III.3, 113.23–114.6.

³⁰ *Gen.* 1.8 καὶ ἐκάλεσεν ὁ θεὸς τὸ στερέωμα οὐρανόν.

³¹ *Psalms* 103.2–3 ἐκτείνων τὸν οὐρανὸν ὡσεὶ δέρριν· ὁ στεγάζων ἐν ὕδασι τὰ ὑπερῶα αὐτοῦ.

story of creation, nor is it Moses who has uttered this but a poet praising God. Even a literal Bible reader like Cosmas should be aware of the difference.

In *De Opificio Mundi* III.1, 110.20–111.4 Philoponus takes great care to prove that the ‘second heaven’ mentioned in *Genesis* 1.8 really is the firmament, not identical with the ‘first heaven’. He also takes care to stress that what is said in *Genesis* 1.6–8 about the creation of the στερέωμα is not a repetition of what is said about the creation of heaven in *Genesis* 1.1. He declares himself content with the fact that the *Psalms* often talk about ‘heaven of heaven’ or ‘heaven of heavens’. He cites *Psalms* 113.24 here in order to underline his view that God had created the first, in the literal sense, true heaven to be his, while the earth and what belongs to the earth is given to mankind. But it is a fact, Philoponus agrees, that God, in creating the firmament, gave the *name* heaven also to that piece of creation. Still, what is said about the firmament is not a repetition of what is said about the first heaven, he states. Besides, the time itself, too, speaks in favour of a difference between them. The first heaven came into being on the first day of creation, the firmament on the second day. Philoponus makes no attempt to explain why the firmament was actually named heaven but he states that the Bible also calls the whole body extending between earth and heaven by the *name* heaven. He cites *Genesis* 1.20 “and birds flying above the earth across the firmament of the heaven”,³² *Genesis* 19.24 “and the Lord rained down brimstone and fire from the Lord out of heaven on Sodom and Gomorrah”³³ and also *Genesis* 7.11 “that very day all the springs of the great deep burst out, the flood-gates of the heavens were opened and rain fell on the earth for forty days and forty nights”,³⁴ to prove that what we in everyday speech name the air, in the Bible often is *named* heaven. The apparent carefulness and trouble Philoponus takes to explain satisfactorily the fact that the word οὐρανός ‘heaven’ in the Bible may refer to three different things and at the same time maintain that there only is *one* heaven shows both how seriously he wants to follow the Bible but also that he repudiates pseudo-science.

³² *Gen.* 1.20 καὶ πετεινὰ πετόμενα ἐπὶ τῆς γῆς κατὰ τὸ στερέωμα τοῦ οὐρανοῦ.

³³ *Gen.* 19.24 καὶ κύριος ἔβρεξεν ἐπὶ Σόδομα καὶ Γόμορρα θεῖον καὶ πῦρ παρὰ κυρίου ἐκ τοῦ οὐρανοῦ.

³⁴ *Gen.* 7.11 τῇ ἡμέρᾳ ταύτῃ ἐρράγησαν πᾶσαι αἱ πηγαὶ τῆς ἀβύσσου, καὶ οἱ καταρράκται τοῦ οὐρανοῦ ἠνεώχθησαν, καὶ ἐγένετο ὁ ὑετὸς ἐπὶ τῆς γῆς τεσσαράκοντα ἡμέρας καὶ τεσσαράκοντα νύκτας.

6.4 The question of the ‘third heaven’

6.4.1 Philoponus’ view

In this context³⁵ Philoponus also takes up the problem with the ‘third heaven’ as we meet it in *2 Corinthians* 12.2–4. Paul says: “I know of a man in Christ, who fourteen years ago (whether in the body or out of the body, I do not know—God knows) was snatched away as far as to the third heaven. I know that this same man (whether in the body or apart from the body, I do not know—God knows) was snatched away to paradise, and heard secret words that man is not allowed to speak.”³⁶ Philoponus makes a very sophisticated interpretation of this passage. Paul had a vision and in his mind he experienced an elevating from the ground all the way up to the ‘first heaven’. In his pure mind, Philoponus says, he was elevated from the ground and was allowed to converse with God and he was considered worthy to listen to unspeakable words. Then Philoponus rounds up in an elegant manner, using the words from *Matthew* 5.8 “Blessed are those whose hearts are pure, says the Lord, they shall see God.”³⁷ It is obvious that Philoponus wants to stress here that the experience Paul made, when he was lifted from the ground, was entirely spiritual. It was a vision, Philoponus claims. Undoubtedly he has true evidence for that in the Bible, for Paul himself begins *2 Corinthians* 12 by saying that he “must boast” of visions and revelations from the Lord. Then the apostle goes on to relate how he was elevated to the ‘third heaven’. But the apostle does not stop with this. In the following two verses he relates that he was also elevated to paradise and that it was in paradise that he heard unspeakable words. We can see here how Philoponus uses *2 Corinthians* 12.2 and makes an explanation, starting from this verse, of how Paul must have experienced his elevation. But Philoponus goes further. He uses the latter part of verse 4 to state that the apostle, who had a pure heart, was allowed to converse with God and was considered worthy to hear unspeakable words. Philoponus does not mention a word about paradise but in a very skilful way he uses *Matthew* 5.4 instead and focuses on the apostle’s pure heart. Philoponus

³⁵ Cf. *De Opf.M.* III.1, 111.16–26.

³⁶ *2Cor.* 12.2–4 οἶδα ἄνθρωπον ἐν Χριστῷ πρὸ ἐτῶν δεκατεσσάρων—εἴτε ἐν σώματι οὐκ οἶδα, εἴτε ἐκτὸς τοῦ σώματος (οὐκ οἶδα), ὁ θεὸς οἶδεν,—ἀρπαγέντα τὸν τοιοῦτον ἕως τρίτου οὐρανοῦ. καὶ οἶδα τὸν τοιοῦτον ἄνθρωπον—εἴτε ἐν σώματι εἴτε χωρὶς τοῦ σώματος (οὐκ οἶδα), ὁ θεὸς οἶδεν,—ὅτι ἠρπάγη εἰς τὸν παράδεισον καὶ ἤκουσεν ἄρρητα ῥήματα, ἃ οὐκ ἐξὸν ἀνθρώπῳ λαλῆσαι.

³⁷ *Matth.* 5.8 μακάριοι γὰρ οἱ καθαροὶ τῇ καρδίᾳ, φησὶν ὁ κύριος, ὅτι αὐτοὶ τὸν θεὸν ὄψονται.

obviously considers himself able to ignore Paul's elevation to paradise but he cannot ignore his elevation to the 'third heaven'.

What *is* then the 'third heaven' in Philoponus' view? By applying his semantical analysis of the different meanings of the word οὐρανός in the Bible, Philoponus is able to show that there actually exist, in a physical sense, three heavens. One is the air between the earth and the firmament, the second is the firmament itself, the third is the one that Philoponus mostly calls 'the first heaven' (ὁ πρῶτος οὐρανός). Further, as Philoponus obviously ignores paradise but agrees that Paul conversed with God and heard unspeakable words, the question appears as to where Philoponus considered Paul to have been when he had his experiences of the divine realm. Here we meet Philoponus' very 'modern' view in regard to psychology of religion. When Philoponus says (111.21–22) that Paul was rising above all beholding of the material world (πάσαν ὑπερανελθὼν τοῦ σωματικοῦ κόσμου τὴν θεωρίαν), he seems to mean that Paul eventually reached a condition where he experienced himself to be in a place that does not exist in physical reality. This is strengthened when he goes on, stating that Paul conversed with God 'with his naked mind' (γυμνῶ τῷ νῶ). By using this Neo-Platonic expression, Philoponus seems to have made his point clear; he does not talk about anything that exists in the same physical meaning as the first heaven, the firmament and the air of the atmosphere.

6.4.2 Cosmas' view

Cosmas has his own idea about Paul's elevation to the 'third heaven'. In *Topography* III.61 he enumerates the elevation as one of the miracles in the *New Testament*. Immediately after having mentioned miracles of faith-healing, viz., that sick people got well when the shadows of the apostles fell on them, he mentions Paul's elevation. This chapter, intended to be a reproach against unbelievers, hints that he did not see the elevation as a spiritual experience as Philoponus did, but considered it to be an actual physical elevation, a tangible miracle on the physical plane.

Further, in VII.9, he warns against believing in three heavens. He agrees with Philoponus that there is only one heaven, the one that was created on the first day, and that there is the firmament, that was *named* heaven. So far Cosmas simply seems to interpret Paul's elevation as a miracle, when Paul in his body was lifted up from the earth to a height of two thirds of the distance from the earth up to heaven, the second heaven that is, the firmament. The reason why Cosmas can interpret 2 *Corinthians* 12.2 the way he does, is likely to be that he

makes another syntactical interpretation of Paul than is usually made. While Philoponus considers ἕως τρίτου οὐρανοῦ to have the same meaning as εἰς (τὸν) τρίτον οὐρανόν ‘to the third heaven’, Cosmas interprets this passage as εἰς (τὸ) τρίτον (τοῦ) οὐρανοῦ ‘to one third of the heaven’. Thus Cosmas exploits, as we can see, a syntactical obscurity in the Greek language.

In IX.15, however, he seems to have moderated his views to some extent. Quite in accordance with the Bible he talks about all the troubles Paul had experienced in his service of the Church. He explains the fact that the apostle often had visions, as being a gift of God’s grace in order to comfort the distressed apostle. So far Cosmas’ interpretation is acceptable, but then he puts words in the apostle’s mouth that obviously has no support in the Bible passage in question, *2 Corinthians* 12.2–4,³⁸ for he claims that Paul uttered: “Corinthians, I know, if it is at all necessary to mention visions and revelations from the Lord, that I myself, in a miraculous way, beyond reason, have been elevated to a very great height, and by that I mean to the double distance from the earth to the firmament, so that only one third of the distance up to heaven remained for me to go there.” Accordingly, to Cosmas the ‘third heaven’ must mean a space high up in the air but below the firmament. Our assumption is confirmed in V.220, where he claims that the ‘third heaven’ is the dwelling-place of the angels and, as we saw in chapter 4, Cosmas believed the angels to be in this world below the firmament. *Topography* IX.15, however, seems to suggest that Cosmas wavers in his standpoint, whether Paul’s elevation happened as an experience in the body or as a spiritual one in a vision. Why else would Cosmas in the very beginning of this chapter stress that God, out of grace, comforted Paul and gave him new strength by help of the visions?

In *Topography* IX.18 Cosmas continues his account of Paul’s experiences. He tells us about the apostle that he was lifted to paradise. As we saw, Philoponus ignored *2 Corinthians* 12.4, where the apostle describes how he was lifted up to paradise and there was allowed to hear unspeakable words. Reading the Bible passage you can easily get the impression that Paul was somewhere up in the sky when he was in paradise. Cosmas, however, has a different opinion. He says in IV.7 that paradise is situated eastwards, in the land beyond, that very land that, according to Cosmas’ conception of the world, encircles the ocean. Cosmas has also drawn a map of this world with paradise marked out. Philoponus on his part, who joined the latter part of verse 4 to verse 2,³⁹ must

³⁸ Quoted above, n. 36.

³⁹ I.e., he joins the two verses in III.1, 111.16–26 when he first describes how Paul was snatched away and then how the apostle was allowed to hear unspeakable words. In the Bible

consider *2 Corinthians* 12.2–4 to describe one vision of Paul’s, while Cosmas and the Bible seem to describe two different visions.

6.5 Philoponus and Greek cosmology

In *De Opificio Mundi* III.3, 113.23–114.6 Philoponus claims to have shown that Moses agrees with those astronomers who are of the opinion that a starless sphere exists outside all the other spheres, and that sun, moon and all the stars are fixed in the sphere next to it, i.e. in the firmament. This opinion held by Philoponus implies that the celestial bodies, i.e., fixed stars and planets, have no movement of their own, but are carried around with the sphere that is called the firmament. Cosmas, as we stated above, placed the celestial bodies below the firmament. He held the same view as Theodore of Mopsuestia concerning their movement, viz., that they were moved by angels.⁴⁰

In III.3, 114.13–23 we can see how Philoponus deviates from Greek cosmology. He mentions the fact that ancient astronomers, in order to come to terms with the apparent anomaly concerning the movement of the stars, have used different hypotheses ‘to save the phenomena’. One effort that seems to have had great impact, was to divide the heaven into several spheres. They have also conferred more than one movement to each of the stars and have expected most of the spheres to carry the planets forward, but also a lesser amount of them to carry the planets in the opposite direction. Aristotle has, according to Philoponus, summed up all the ancient hypotheses and has come to the conclusion that there are fifty-five spheres in all.⁴¹ Philoponus refutes all this as being conjectures without anchorage in reality. Why else would there be such great disagreement between them? Ptolemy, on the other hand, is trustworthy in Philoponus’ eyes. Ptolemy refuted all the ancient hypotheses and accepted nine spheres that carry all the planets forwards. To explain the apparent anomaly in the movements he introduced eccentric spheres that do not share the same centre as the nine primary spheres. He named them epicycles.⁴² Each planet was assigned one epicycle and was moved by it in addition to the movement accomplished by the sphere on which it was fixed. This resulted in two movements of

passage the unspeakable words were heard by the apostle in Paradise, but Paradise is not mentioned at all by Philoponus.

⁴⁰ Cf. chapter 4.

⁴¹ Aristotle, *Metaph.* XII.1074a10–12.

⁴² On epicycles and Ptolemy’s concept of them cf., e.g., Toomer (1984) 226.

the planet, the movement of the forward-going sphere and that of the epicycle. Besides, it happens that the planet sometimes moves on the epicycle in a movement uniform with the whole sphere, but sometimes it also moves irregularly, forwards or backwards, swiftly or slowly, and sometimes even seems to stand still. All this taken together makes up Ptolemy's explanation of the apparent anomaly of the movements of the planets. Undoubtedly, Philoponus accepts this explanation and, like Ptolemy, he rejects all the ancient hypotheses as not being verifiable.

In III.3, 116.1–23 Philoponus emphasizes that there exists only one heaven. From a Christian standpoint this opinion naturally is very important, as the very first line of the Bible says that God created heaven and earth. But Philoponus also wants to show that this is the general opinion among the Greek philosophers. Therefore he turns to Aristotle. To divide the heaven into different spheres is only a method to try to facilitate the explanation of the phenomena. The heaven is one, consisting of the spheres in whatever number and even dependent of them. Had there been several heavens, what about the rotation of the celestial bodies? But Aristotle has shown that the rotation of the celestial bodies is finite, not infinite, and he has said: “that the heaven is one is obvious.”⁴³ Philoponus also makes allusions to linguistic usage. In the Hebrew language, the plural is often used for the word heaven but in the Greek language the singular is always used.

Cosmas and Philoponus agree, however, that the firmament exists and that in practice it is that visible body, created on the second day of creation, which God *named* heaven. To Cosmas it is the essential intersection surface that effectively separates from each other the two spaces of which one contains all that belongs to earthly, destructible things and the other all that belongs to heavenly, eternal things. To Philoponus the firmament has its great importance in creation as carrier of the celestial bodies that illuminate the earth. He takes pains to investigate and elucidate its movements and its substance, a fact that is obvious through the whole of book III of *De Opificio Mundi*.

In III.5, 117.27–119.5 Philoponus makes extensive use of Plato's *Timaeus*. He agrees with Plato that the firmament is made up of the four elements. Much to Simplicius' annoyance,⁴⁴ he had rejected a fifth element, the ether, as being a substance for the celestial bodies.⁴⁵ He claims that sun and moon, as well as the

⁴³ *Metaph.* XII.1074a31 ὅτι εἷς οὐρανός ἐστι φανερόν.

⁴⁴ Cf. Simplicius, *In Arist. Cael.* 7.82.4–11 Heiberg.

⁴⁵ Philoponus was not the first to reject the ether. Straton of Lampsakos did, cf. Straton frg. 84 Wehrli (=Stobaeus 1.23.1) Παρμενίδης, Ἡράκλειτος, Στράτων, Ζήνων πύρινον εἶναι

stars, are mainly composed of fire, a fact that accounts for their luminosity, for luminosity does not belong by nature to any of the elements except fire.

In this chapter he also declares that he takes it for granted that Moses supposed that the firmament, which we can see is transparent, consists mostly of water and air, the two transparent elements. When the firmament came into existence, these elements sort of changed substance into a firmer matter. This fact should also account for the plural in ‘in the middle of the waters’,⁴⁶ a statement which can be understood since Philoponus claims that Moses used the Hebrew word for ‘water’ to designate both water and air. In III.16, 155.18 he makes a further exposition on this subject and comes to the conclusion that the plural is quite logical for there are two distinct waters Moses speaks of, distinguished both according to place and substance, only sharing the name of water. Philoponus further stresses that God made the firmament a boundary between water and air.⁴⁷

In III.5, 119.1–5 Philoponus claims further that Plato seems to be in agreement with the cosmogony Moses stands for, when he says that the celestial body has a share in the firmness of the earth, for the earth is the only element that has a firm, solid body. Accordingly, Moses is to be regarded as quite a good physicist when he states that the transparency of the firmament depends on air and water. He gives it the name ‘firmament’ because a solidification of the fluids has occurred. Philoponus goes on to give us examples from the surrounding nature, which show how moisture congeals when changes occur and how firm as well as dry components change into fluids when moisture is added to them. He points out what happens in our bodies in connection with the digestion, how dry food like bread and cooked meat become fluid getting into the bloodstream and how the blood in turn transforms into solid units like sinews and bones. Philoponus also stresses that, when it comes to the changes that happen in our own bodies, it can actually be observed that dry and fluid substances are transformed into each other. Then he sums up that the firmament has a substance which consists of the elements known to us on the earth, but to the larger part it consists of water, which is the thicker of the two transparent elements.

τὸν οὐρανόν, on which Wehrli comments: “Die alte Lehre von der feurigen Natur des Himmels konnte Straton durch seine Gewichtstheorie begründen (fr. 50–53). Dies bedeutet Preisgabe des fünften aristotelischen Elementes, dessen spekulativ-theologischer Charakter sich auch nicht in Stratons Weltbild gefügt hätte.”

⁴⁶ *Gen.* 1.6 ἐν μέσῳ τῶν ὑδάτων.

⁴⁷ *De Opf.M.* III.16, 156.1–4 δύο διακεκριμένων ὑδάτων καὶ τοῖς τόποις καὶ ταῖς οὐσίαις, μόνῳ δὲ κοινωνούντων ὀνόματι, οἷον μεθόριον ἐποίησεν ὁ θεὸς τὸ στερέωμα.

III.12 is a comparatively long chapter extending from 144.11 to 148.14. Philoponus apparently has the intention to prove that it is the firmament that is moving while the stars are fixed to it. He seems to presuppose that it is clear to his readers that he has already proved the heaven to be a spherical, rotating body. Now he wants to prove that, when the hemispheres rise and set, respectively, they carry the stars with them. Without any contact with the firmament the stars would not be able to move at all. To this end he seeks support in the Bible and says that they could not even *be* anywhere else, for the firmament is the place that God himself has assigned to them: “God placed them in the firmament of the heaven as lighting of the earth.”⁴⁸

Then he turns to observable evidences. The Milky Way,⁴⁹ which he considers to be in a kind of symbiosis with the firmament, unable to move by itself, gives Philoponus an evidence for the sphericity of the heaven. We can see it every night be carried around together with the fixed stars, some parts of it setting and some rising in quite the same way as the signs of the zodiac are seen to behave; besides, the Milky Way is easily observable because of its colour. What Philoponus accomplishes with this argument is nothing new. It is the same thing he has shown before, viz., that the heaven performs one daily revolution.

Philoponus goes on and puts forward an argument for his opinion that the daily movement of the heaven actually is the movement of the firmament, not of the sun. Also this argument is built on what can be observed.

Let us suppose that the sun is in the Aries. We know that during one month it moves (a distance equal to) one sign and that it completes a year when it has moved through the twelve signs. Accordingly, the daily movement of the sun is one thirtieth of a sign. If now the sun is in the Aries, it must follow that the sign Aries itself is invisible during the day as the sun is in it. The same is valid for the night because it sets together with the sun. When the sun sets, the Taurus will be seen at the western horizon. When the sun moves into the Taurus and sets there, the Taurus, in turn, will become invisible and the Gemini will show at the western horizon at sunset. Exactly the same thing will happen when the sun goes through the Gemini. When the sun sets, the Cancer will appear on the western horizon. If now the Taurus is more towards the east than the Aries, the Gemini more towards the east than the Taurus and the Cancer more towards the

⁴⁸ *Gen.* 1.17 ἔθετο γὰρ αὐτοὺς ὁ θεὸς ἐν τῷ στερεώματι τοῦ οὐρανοῦ εἰς φαῦσιν ἐπὶ τῆς γῆς.

⁴⁹ In antiquity the Milky Way was not considered to be an accumulation of stars, but was rather considered to be a belt of a sort of milk-coloured substance overall (whence its name); see Toomer (1984) 400.

east than the Gemini and so on with the signs that follow, then it is apparent that the sun has its own movement, making its orbit from the west to the east moving through only one part of the zodiac every day.

By this argumentation Philoponus claims to have proved that the circular motion, taking place in twenty-four hours, belongs to the firmament in which God positioned all the celestial bodies. The sun takes a full year to perform its orbit. The daily movement belongs to the firmament which has all the celestial bodies fixed to it.

Philoponus continues his argumentation by asserting three things:

(i) If the fixed stars have a movement of their own and are not just dragged along by the movement of the sphere, all of them must either move (alt. *a*) with equal speed or (alt. *b*) with unequal speed (146.28–147.2).

(ii) If it can be proved that both the alternatives (*a* and *b*) are false and absurd, the conclusion will be that the fixed stars do not move at all (147.2–4).

(iii) But they do move. Therefore it must be the firmament that moves, dragging the fixed stars along (147.4–8).

Philoponus then sets out to prove that both the alternatives *a* and *b* are false. To prove alternative *a* to be false is rather easy. As the stars in the north and the south rotate in smaller circles than the stars at the equator but all perform one revolution in their orbits during one day and one night, the stars at the equator must move at greater speed than stars further north or further south. Accordingly, the speed must decrease with the distance from the equator and the speed is not the same for all the stars.⁵⁰

To refute the validity of alternative *b* is obviously more difficult, the more so as Philoponus has used the fact that the stars seem to move at different speeds as his main argument against alternative *a*. Besides, in this passage of the text⁵¹ he does not give any proper proof, but simply refutes the alternative by laying it down that this alternative is both absurd and irrational.⁵²

The conclusion from this whole argumentation ends in this statement. Both the alternatives have proved impossible. The stars do not move by themselves,

⁵⁰ Cf. *De Opf.M.* III.12, 147.8–25.

⁵¹ Cf. *De Opf.M.* III.12, 147.25–148.10.

⁵² ἀποκληρωτικόν ... τοῦτο καὶ παντελῶς ἄλογον (148.9–10).

it is the firmament that moves, dragging the stars along.⁵³ We can notice, however, that the argumentation is weak. Provided that Philoponus could have proved—which he has not—that the fixed stars neither can move with equal speed (alt. *a*) nor with unequal (alt. *b*), no conclusion could be drawn from this other than that the stars do not move at all. It does not follow automatically that the observable movement of the stars does depend on the fact that they are dragged along together with the movement of the firmament.

The question is, whom did Philoponus hope to convince by this argumentation? What audience did he have in mind? In III.12, 144.22 he declares that he turns to those who are ignorant of science (τοῖς τῶν μαθημάτων ἀπείροις). Could it be that he considers them stupid enough to let themselves be convinced by his imperfect argumentation and thereby shamelessly using their ignorance? Or does he, like Cosmas, speak to those who already are convinced, those who only need to be confirmed in their beliefs and those who are so firm in their belief that nothing can move them?

In III.17, 157.4–159.3 Philoponus seems to make some kind of outline of his conception of the heaven. The heaven, which encircles the universe as a boundary, was created together with the earth on the first day. This heaven is also a boundary to the firmament in the same way as the firmament is a boundary to everything within. Also the firmament can be called heaven since the faculty of sight comes from it, for God placed all the light-giving celestial bodies in the firmament. But also the air is often called heaven because of its transparency, which makes the light shine right through it, down on us, and because all colour penetrates it. But since it is invisible, without any colour of its own, it cannot prevent the passage of other colours through itself. In the same way as colours can be perceived by our eyes through uncoloured glass, the firmament, being transparent and uncoloured, conveys the light of the celestial bodies to us.

6.6. The question of resurrection

6.6.1 Cosmas and Christian after-life

Light and air as well as the stars are important things also to Cosmas but he does not associate them with the heaven in the same way as Philoponus does. To Cosmas the heaven is the *space* that is prepared and ready for our future condition, the eternal life which is to follow after the resurrection from the dead.

⁵³ Cf. *De Opf.M.* III.12, 148.11–14.

This space is now the abode of God the Father and of Jesus Christ who entered there on Ascension Day after his passion and resurrection. The heaven does not move at all, nor does the firmament, which consists of water that has congealed and solidified into a kind of icy material.

Philoponus, on his part, showed great interest in the firmament as well as in the physical properties of the heaven in general. In such contexts he poses as a genuine scientist. On the other hand, when we focus our interest on the spiritual domain, Cosmas has much more to say. We must also remember that, although Cosmas lived and worked in Alexandria, he was an adept of the Antiochene school, which refuted the allegorical method of exegesis. Therefore he claimed that the Bible was to be understood literally, according to its original intention.

After the life on this earth a resurrection from the dead will occur. Cosmas stresses over and over again that we humans live on this earth and in this present condition as in a school. It is here on the earth, while we live in our earthly bodies, that we are brought up and are instructed in order to become prepared for the second condition, the eternal life in the Kingdom of Heaven. Instruction here on earth is effected by sorrows and pains as well as by pleasure. We also get information and knowledge about God by observing and contemplating his created works.⁵⁴

Cosmas starts from *1 Corinthians* 15⁵⁵ when he makes his comments about the resurrection from the dead. He cites Paul's example with the seed that is put into the ground and dies.⁵⁶ The seed dies, according to Paul, but then God will give the forthgrowing plant just that shape he wants it to have. Cosmas adds that the seed bursts forth through God's power and providence and appears rich, ingeniously gifted and extremely beautiful. This same seed so destructible and a subject to change, mortal and changing in the earth, bursts forth, growing out of the ground, in countless quantity and of wonderful beauty. This is a wise, beautiful and artistic deed of the providence in God, the Creator of all.⁵⁷ In this section Cosmas has made an exegesis of Paul's text in a kind of lyric wording, but

⁵⁴ Cf. *Topogr.* VII.72–76.

⁵⁵ Cf. *Topogr.* VII.28–33.

⁵⁶ *1Cor.* 15.35–38 Ἄλλ' ἐρεῖ τις, πῶς ἐγείρονται οἱ νεκροί; Ποίῳ δὲ σώματι ἔρχονται; Ἄφρον, σὺ ὁ σπείρεις οὐ ζωοποιεῖται, ἐὰν μὴ πρῶτον ἀποθάνῃ· καὶ ὁ σπείρεις, οὐ τὸ σῶμα τὸ γεννησόμενον σπείρεις, ἀλλὰ γυμνὸν κόκκον, εἰ τύχοι σίτου, ἢ τινος τῶν λοιπῶν· ὁ δὲ θεὸς δίδωσιν αὐτῷ σῶμα καθὼς ἠθέλησε, καὶ ἐκάστῳ τῶν σπερμάτων ἴδιον σῶμα.

⁵⁷ Cf. *Topogr.* VII.29.

he is at the same time strict in his analyse, which, in turn, provides scope for his practical view on the resurrection.

Cosmas goes on, giving his own exegesis of the rest of *1 Corinthians* 15. His exegesis of this chapter does not leave any doubts behind, concerning his view on the resurrection and the Kingdom of Heaven. He looks at the resurrection in a kind of practical, matter-of-fact way. He seems to believe, that the same bodies that belonged to us during our life here on earth will be ours again after the resurrection. There is no support for this thought of his in the Bible, neither here in *1 Corinthians* nor in *Genesis* 2 and 3, where we can read about the creation and life-giving of man and the fall of man. It is surprising, not to say strange, that Cosmas turns to such an exegesis immediately after his vivid, but highly probable exegesis in the preceding section. Matter will be sifted and winnowed as in a sieve he says (καὶ ὡσπερ ἐν κοσκίνῳ σαλευομένῳ) in order to find the elements that once made each human being. Then God will re-use the same material to rebuild and restore the bodies of each individual.⁵⁸ Moreover, God will thereafter bring it together with the right soul. “Is it not remarkable with God?” Cosmas says. “God is a judge over heart, reason and thoughts in every person. He scrutinises everybody’s reason and thoughts in every moment from the beginning and right to the end. It is therefore possible for him to do what is easier, viz., to discern bodies from bodies.”⁵⁹ This thought, however, that God should take care to discern bodies from bodies, is not represented in the Bible but the *idea* seems similar when John the Baptist says in *Luke* 3.17: “He has the winnowing-shovel in his hand in order to clean out his threshing floor and gather the grain in his barn.”⁶⁰ It can also be added that *Psalms* 138 contains the thought that God has full control over men’s intentions, thoughts and minds. At least the five first verses give that impression. The very first verse says: “Lord, you have examined me and you know me” (Κύριε, ἐδοκίμασάς με καὶ ἔγνων με).⁶¹

⁵⁸ Cf. *Topogr.* VII.31.

⁵⁹ Cf. *Topogr.* VII.32.

⁶⁰ *Luke* 3.17 οὗ τὸ πτύον ἐν τῇ χειρὶ αὐτοῦ διακαθάραι τὴν ἄλωνα αὐτοῦ καὶ συναγαγεῖν τὸν σῖτον εἰς τὴν ἀποθήκην αὐτοῦ.

⁶¹ Origen came to the conclusion that the substance of the body remains the *same*, only the quality changes, heavenly, then earthly, then heavenly again. This idea is similar to Cosmas’, to my understanding, viz., that God uses the same material. Origen’s doctrine of the risen body, following Paul’s comparison of the seed and the plant, shows that he reckons at the same time with an identity of substance and a difference of quality between the earthly body and the body of glory which, in turn, is assimilated to the ethereal bodies of the angels. Cf. Crouzel (1989) 91, 92.

The second condition really matters very much to Cosmas, so much in fact, that every detail he can come to think of matters. Therefore he also enters a discussion on how it can be possible for stillborn or dead foetuses to rise from the dead. Knowledge is necessary if they are to have a share in the resurrection, but it is in this present condition, here on earth, that we humans receive knowledge. Cosmas states that the foetus is a rational being and by tasting its mother's womb, which is an image, although imperfect, of this world, it becomes aware of its future condition. When the foetus acquires knowledge in that future condition, it will remember the sensation of the womb, in which, however deficiently, it has experienced its present condition.⁶² Also, Cosmas continues, deceased foetuses will perceive the elements and the whole universe standing there as teachers. Therefore, reasoning with their perfect knowledge, they will arrive at a recognition of their previous existence and of the knowledge of God.⁶³

What about maimed bodies? Will it be possible for them to rise healthy and perfect? Cosmas makes the illustration of how God took one of Adam's ribs, the smallest part of his body, building a perfect woman from it. He also makes the illustration that, when a blind or maimed man and woman are united, their offspring is born sound and healthy. Why then not believe, that on the day of resurrection we are going to be brought out from the graves through a better birth than from our mother's womb?⁶⁴

Cosmas, who is well aware of the prevalent objections to the resurrection of the bodies, answers those who wonder how it could be possible that our bodies, after they are decomposed and changed into thousands of other bodies, could rise as the same bodies they once used to be.⁶⁵ Cosmas holds the opinion that, when our bodies are dead and decomposed in their components, these parts still retain their own identities. All the time they are perceived by God who knows exactly which parts belong to every single human being. God can bring together the different parts by inducing a movement. Our bodies rise again in their own identities and we will not wake up in somebody else's body.⁶⁶

It is evident that Cosmas tries to interpret Paul literally. A wheat-seed is put in the ground growing forth as wheat and nothing else. But when the wheat rises from the ground, it is better in every way than it was the moment it was put

⁶² Cf. *Topogr.* VII.79.

⁶³ Cf. *Topogr.* VII.79.

⁶⁴ Cf. *Topogr.* VII.81.

⁶⁵ Objections against the resurrection of the bodies occur in all Christian apology.

⁶⁶ Cf. *Topogr.* VII.33.

down. Then he transfers this idea to be valid for humans. We are buried in the ground, we are decomposed into components. We will rise again at the end of time better and more beautiful than we used to be when we lived here on earth. Our bodies will be the same bodies in that respect that they will be rebuilt from their own, individual substance. The idea, however, that all humans get their own material bodies back at the resurrection is not supported in the Bible. It is an absolute contradiction to Paul's teaching about the 'bodies of glory' in chapter 15 of *1 Corinthians*. In verse 44 of this chapter Paul says: "A physical body is sown, a spiritual body is raised. If there is a physical body, there is also a spiritual body."⁶⁷ Cosmas seems to have slipped in his train of thought and missed what is very essential to Paul, viz., that the body which is raised is a purely spiritual body.

Cosmas states that God has the power to rise the dead, but it is Christ who has activated this power by his obedience to the Father, which culminated in his passion, death on the cross and resurrection. The assurance that Christ has risen from the dead and has ascended right through the firmament into the Kingdom of Heaven, the second condition, and that he has done it for our sake, that we too may have a share in the resurrection from the dead, runs as a main thread through the whole of *Christian Topography*.

6.6.2 Philoponus and spiritual resurrection

Philoponus does not treat the subject of the resurrection from the dead as thoroughly as Cosmas does. But in *De Opificio Mundi* VI.19, 270.24–26, when he takes up the subject of man as the image of God, he cites *Mark* 12.25: "When they rise from the dead, men and women do not marry; they are like God's angels in heaven."⁶⁸ Philoponus is here anxious to point out that, when the Bible speaks of the image of God, it is not a bodily likeness that is intended. The point is that humans are the only creatures in creation here on earth who are endowed with reason. This is valid for both men and women. From this I conclude that Philoponus means a spiritual resurrection, not a bodily one, when the soul, or 'the rational portion of man' (τὸ λογικόν), as Philoponus calls it, will reach heaven and be like the angels.

⁶⁷ *1Cor.* 15.44 σπείρεται σῶμα ψυχικόν, ἐγείρεται σῶμα πνευματικόν. Εἰ ἔστιν σῶμα ψυχικόν, ἔστιν καὶ πνευματικόν.

⁶⁸ *Mark.* 12.25 ἐν γὰρ τῇ ἀναστάσει οὔτε γαμοῦσιν οὔτε γαμίζονται, ἀλλ' ὡς ἄγγελοι θεοῦ ἐν οὐρανῶ εἰσι.

In VI.22, 274.8–276.13 Philoponus cites different Bible passages that speak of man as consisting partly of a destructible body made from clay or earth and partly of a soul which lives on after the physical death. The Bible names human beings sometimes souls, ψυχαί, sometimes flesh, σῶμα, according to Philoponus. He cites Bible passages as *Job* 10.9 “Recall that you moulded me like clay; and you will turn me back to earth again”, *Genesis* 3.19 “Earth you are, to earth you will return”, *Psalms* 64.3 “All flesh will come to you”, and *Genesis* 46.27 “All the souls of Jacob's house, who arrived in Egypt together with Jacob, were seventy-five in all.”⁶⁹ All these quotations, I presume, show that Philoponus has the ‘second story of creation’ in mind, *Genesis* 2.7, when God created man from earth and blew life into his nose.⁷⁰ To Philoponus it should also be natural that the Bible names human beings sometimes souls, sometimes flesh. While here on earth, man is that unique creature bound to earth by the body but still belonging to the spiritual world or heaven by the soul or reason.

It should also be mentioned that Philoponus makes a sharp distinction between the souls of the animals and the human soul. The animals got their souls and their bodies at the same time when they were created, but the human soul is separated from the body, for it entered the body from the outside when the body already had been created.⁷¹ Philoponus also rejects the opinion which he maintains that Origen stands for,⁷² viz., that the breath that God blew into Adam’s nose was the same as the Holy Spirit that Christ after his resurrection breathed on his disciples.⁷³ It was the breath of life God blew into Adam, and Adam got his soul. But what kind of soul? Surely not the same soul as the animals have that make them living creatures and which was created together with their perishable bodies. The human soul that Adam, according to the Bible, was the first to receive gave him life but also reason, i.e., made him the image of God. This is an indication, as I see it, that to Philoponus the human soul should be something more like the Neo-Platonic conception νοῦς.

⁶⁹ *Job* 10.9 μνήσθητι ὅτι πηλόν με ἔπλασας, εἰς δὲ γῆν με πάλιν ἀποστρέφεις, *Gen.* 3.19 γῆ εἶ καὶ εἰς γῆν ἀπελεύση, *Psalms* 64.3 πρὸς σέ πάσα σὰρξ ἤξει, *Gen.* 46.27 πάσαι αἱ ψυχαὶ οἴκου Ἰακώβ αἰ εἰσελθοῦσαι μετὰ Ἰακώβ εἰς Αἴγυπτον ἑβδομήκοντα πέντε.

⁷⁰ Cf. *Gen.* 2.7 καὶ ἔπλασεν ὁ θεὸς τὸν ἄνθρωπον χοῦν ἀπὸ τῆς γῆς καὶ ἐνεφύσησεν εἰς τὸ πρόσωπον αὐτοῦ πνοὴν ζωῆς, καὶ ἐγένετο ὁ ἄνθρωπος εἰς ψυχὴν ζῶσαν.

⁷¹ Cf. VI.23, 276.19–277.2.

⁷² Cf. VI.24, 278.18–280.10.

⁷³ Cf. *John* 20.22.

Further, in VI.22, 274.23–275.2 Philoponus cites from *Matthew* 6.27 “Who can, by worrying, add a single cubit to his life-time?” and *Matthew* 16.25 “Whoever wants to save his life will lose it, but whoever loses his life for my sake will find it.”⁷⁴ Thereby he stresses that ‘life’ or length of life (ἡλικία) is intended for the body and the word ψυχή that we translate ‘life’ is intended for the soul in contrast to the body. That ψυχή is used in *Matthew* 16.25 to describe the body or physical life, Philoponus takes as a pretext for the fact that the terminology of the Bible is not consistent. Accordingly, Philoponus interprets the second Bible passage in such a way, that the statement of Jesus means: those who, for Jesus’ sake, surrender their bodies to martyrdom, will save their ψυχαί, their souls. Martyrdom, therefore, can destroy the body but in no way the soul; on the contrary, you will find, or rather save your soul by the destruction of the body. It is not the physical body that rises from the dead on the day of resurrection, it is the soul that is allowed to continue to be alive.

The body-soul dichotomy is also called into action by Philoponus when he explains the meanings of the expressions ‘internal man’ and ‘external man’.⁷⁵ In *2 Corinthians*, 4.16 Paul obviously refers to man, the body created of dust, when he speaks of ‘the external man’ and of the soul, when he speaks of ‘the internal man’. The soul is not created of dust in Philoponus’ thinking. This fact will be revealed either through a resurrection or in another way. In Philoponus’ view, accordingly, there is a sharp division into two parts between the body and the soul, and here his Neo-Platonic thoughts are doubtless apparent.⁷⁶

We have seen above that Cosmas ascribes great importance to *1 Corinthians* 15, but curiously enough Philoponus takes no notice of this famous ‘Resurrection Chapter’. He cites verse 41 on two occasions, when commenting on the light of the planets and the stars⁷⁷ and on the beauty and perfection of creation,⁷⁸ respectively. The verses 47–48 are quoted in a passage dealing with Christian lifestyle.⁷⁹ Why does not Philoponus mention the parable of the seed? Certainly there is full scope to make an interpretation of that parable as meaning a resur-

⁷⁴ *Matth.* 6.27 τίς γὰρ μεριμνῶν δύναται προσθεῖναι ἐπὶ τὴν ἡλικίαν αὐτοῦ πῆχυν ἓνα; *Matth.* 16.25 ὃς ἐὰν θέλῃ τὴν ψυχὴν αὐτοῦ σῶσαι, ἀπολέσει αὐτήν, ὃς δ’ ἂν ἀπολέσῃ τὴν ψυχὴν αὐτοῦ ἕνεκεν ἐμοῦ, εὐρήσει αὐτήν.

⁷⁵ Cf. *De Opf.M.* VI.22, 275.25–VI.23, 276.1–13.

⁷⁶ With reference to Philoponus’ Neo-Platonic thoughts, see chapter 2.

⁷⁷ Cf. IV.12, 184.25.

⁷⁸ Cf. VII.8, 298.12.

⁷⁹ Cf. VI.8, 244.6–10.

rection of spirit and soul. Besides, Philoponus could easily have refuted Cosmas' 'bodily' interpretation had he wanted to. I think that Philoponus rejects the thought that man as a whole—body, soul and spirit—is put in the ground and decomposes. I likewise think that he rejects the thought that the resurrection will happen only “when the last trumpet blasts”.⁸⁰ I take it that Philoponus believes that the soul is set free at the moment of death and then continues to live. He might not want or dare to be at variance with Paul, but prefers to be silent.

In my view, this deliberate silence of Philoponus is probably due to the fact that he had enough trouble to defend his standpoint according to the Holy Trinity.⁸¹ We can take it into account that his standpoint in this particular issue was controversial and he might have considered it unwise at this point, when the Council of Constantinople was to take place in the near future, to put forward another controversial standpoint. We should also consider that he might have found Cosmas' ideas and Cosmas' expositions of the resurrection from the dead far too absurd to be taken seriously and, accordingly, to be answered and dealt with. Another explanation for his silence could be that he did not want to declare his Neo-Platonic thoughts and sympathies too frankly.

When Philoponus actually does mention man's resurrection from the dead, he is very careful to stress that it is a spiritual resurrection. It is the soul that rises, the Spirit of Life, that God once in the beginning of time breathed into Adam to give him life.⁸² When the purified, saved soul has got rid of the body, it will see God face to face.⁸³ The soul will then be like the angels in Heaven, those spiritual beings that serve God night and day.⁸⁴ Further, Philoponus stresses that God created man in his own image *but* he created male and female. The image, the likeness to God is therefore spiritual and has nothing to do with

⁸⁰ Cf. *1Cor.* 15.52.

⁸¹ Cf. Sorabji ed. (1987), where H. Chadwick says on page 50: “Like Severus of Antioch, he allows that the one composite nature of the incarnate Word has a plurality of properties, some divine, others human. But properties can be plural when the entity possessing them is only one. A man as animal is both rational and mortal.” Cf. also *ibid.* 31–32 where Sorabji says, speaking of *On the Trinity*, also known as *On Theology*, published late in 567, and also of *Against Themistius Letter to a Partisan*: “Philoponus apparently committed himself to tritheism, in regard to the persons of the Trinity. At any rate he declared that each of these three hypostases was God, that there were three Gods, and that they were a plurality of substances. As regards the Trinity, it is a universal, and so exists in our minds. There is a single God only in thought, if the Trinity were a single God, it would be a fourth one.”

⁸² *Gen.* 2.7.

⁸³ *1Cor.* 13.12.

⁸⁴ *Mark* 12.25.

the body. For we must remember that Philoponus was a Neo-Platonist as well as he was a Christian. Besides, we know that Plato himself considered it a justifiable punishment for an evil man to be transformed into a woman in his next incarnation.⁸⁵

6.7 Summary

We have seen that Cosmas' and Philoponus' respective views concerning the heaven are very different from each other. What else could be expected considering their different outlooks on the universe? Cosmas upholds his belief that the heaven, which was created on the first day of creation together with the earth, is an actual space above the firmament. In this space he places God. He repeats again and again that this space is prepared for our future condition. The firmament is placed by God as a partition wall between the first heaven or Kingdom of God and this world or condition. In this present condition, all created beings, all that exists, including the angels and the stars, now dwell. Cosmas also assures in his work that Christ, who is the first to have risen from the dead, has ascended into the upper space or the future condition as precursor for us and has thereby opened or inaugurated a new, living way.⁸⁶

Philoponus speaks of Christ's resurrection in a quite different way. In *De Opificio Mundi* II.20–21 (95–102), he discusses Theodore's calculations on the time Christ remained in the tomb. The very purpose of Christ's death and resurrection—the doctrine of atonement—which is one of the pillars in Christian faith, seems not to have been of much interest to Philoponus. What seems to be of great interest to Philoponus, however, is the number of the heavens, which he reckons to be two. As we have seen, Philoponus believes that the first created heaven is a starless sphere which is situated outmost in the universe. The firmament, which also is *named* heaven, is the sphere next to this starless sphere and it has all the stars fixed to it. By this Philoponus succeeds to unite the biblical doctrine about the two heavens to the most advanced astronomical doctrines of his time. In doing this he uses two manoeuvres which are not recorded elsewhere: (i) He places ὁ πρῶτος οὐρανός on an equality with the starless ninth sphere which Ptolemy and Hipparchus count on, and (ii) he reckons Ptolemy's epicycles to be a kind of outgrowths on the firmament. By doing so he need not

⁸⁵ *Timaeus* 90E, Bury (1989) 248.

⁸⁶ Christ says about himself that he is the way to the father. Cf. *John* 14.6.

increase the number of the spheres in addition to the two heavens that are firmly attested in the Bible.

According to Cosmas, God built the firmament out of his own created matter, viz., water. Philoponus, on his part, agrees with Plato that the firmament consists of the same elements which exist here on earth and first and foremost the transparent ones, water and air. But also earth is included since earth is the only element which has a firm, solid body. Philoponus, however, rejects the ether or the fifth element introduced by Aristotle but he regards Moses to be a good physicist since Moses states that the transparency depends on water and air. The *name* firmament depends on a solidification of the fluids. Philoponus conducts a line of reasoning and arrives at the conclusion that Moses is right in his statement, for Philoponus shows how moisture congeals when changes happen and how solid and dry components change into fluids if moisture is added. As the digestion behaves in our bodies (bread and cooked meat become fluid and go into the bloodstream and the blood, in turn, changes into solid things like sinews and bones), in the same way the firmament consists of the elements that we know here on earth but mostly it consists of water which is the thicker of the two transparent elements.

7 General summary

The scope of this study has been to compare two Christian individuals of different backgrounds and belonging to different fractions of the Church and to see how they argue for their respective points of view on important questions at the back-ground of the turbulent time for the Church in sixth century Alexandria.

Cosmas, following in the footsteps of Theodore of Mopsuestia, argues in his work *Christian Topography*, for a structure of the world which can be likened to a two-floor building with the firmament for ceiling and the flat earth for floor. Philoponus, following Greek scientists, argues, in his work *De Opificio Mundi*, for a spherical universe with the round earth in the middle of it. Both Cosmas and Philoponus lean on Moses' story of creation, but while Cosmas uses it more or less as a text-book, Philoponus refutes such an usage of the book and claims that Moses' aim with his book was to bring people to knowledge about God.

When it comes to the actual creation day by day, according to Moses' story, Cosmas explains that God put Moses in a dream-like condition on Mount Sinai and showed Moses how he accomplished the creation day by day. Cosmas then tells about the course of the creation in a rather matter-of-fact way. Philoponus explains and analyses every single passage very carefully, in a scientific way and on the pattern of Basil's *Hexaemeron*.

Angels are a subject for lively discussions both on Cosmas' part and Philoponus', and they differ much in their views on the angels. Cosmas means that the angels live in this world under much the same condition as men. They serve men at the order of God. Even if they are made of a very fine material, Cosmas reckons that they are equipped with bodies. Philoponus, on his part, reckons the angels as bodyless servants of God equipped with a limitless power. Further, Philoponus assures that angels can only be contemplated by the pure mind. When it comes to the angels, Philoponus seems to get himself in trouble. He had to fit in the angels, which were real beings to ordinary people, in *De*

Opificio Mundi, his first greater theological work. A fact that added to his difficulty would have been that the doctrine about angels is not displayed in detail in the Bible. In his treatise on the angels, Philoponus uses philosophical and technical terms more often than in other treatises in the book. He also accuses his opponent of not understanding these terms. When a Greek philosopher or scientist needed a technical term, he simply took a word from the ordinary Greek language and gave it a special meaning, so how could, e.g., Cosmas be expected to understand the word for place, τόπος, as three-dimensional extension? That Philoponus feels more at home with philosophical reasoning than with theology is perhaps the reason why, when Philoponus and Theodore argue and interpret their respective views on the angels, they talk at cross-purposes more often than they do when they treat other subjects.

Cosmas and Philoponus agree that there are only two heavens, the first heaven that was created on the first day, and the firmament. Cosmas claims that both heaven and earth are immobile and that the movements of the stars take place in the air below the firmament and are brought about by angels. Philoponus claims, on his part, that the celestial bodies are fixed on the firmament and move together with the firmament. Cosmas believes that the sun during the night is hidden by a great height, and Philoponus claims that it is below the earth, together with one of the hemispheres. In their discussions of heaven, both Cosmas and Philoponus use Bible passages to prove their respective views.

The survey given in this book has hopefully exemplified how Philoponus, exploiting his philosophical and scientific training, is able to problematize different theological questions in his work and discuss these questions from a scientific point of view. Cosmas, on the other hand, is, even if he is not totally unfamiliar with Greek science, alien to much of that strict scientific reasoning.