

SCRINIUM

VOLUME 12 • 2016

|  |     |
|--|-----|
| Editorial  | 1   |
| Abbreviations  | 2   |
| <b>Ethiopians and the Others</b>   |     |
| “Angels in the Guise of Saints”: A Syrian Tradition in Constantinople<br>VLADIMIR BARANOV  | 5   |
| On the Dating of the Ethiopian Dynastic Treatise <i>Kəbrä nəgāšt</i> : New Evidence<br>SERGE A. FRANTSOUZOFF   | 20  |
| Joasaph II in an Unpublished List of the Metropolitans of the Ethiopian Church<br>EKATERINA V. GUSAROVA  | 25  |
| The Disputed <i>Life</i> of the Saintly Ethiopian Kings ʾAbrəhā and ʾAṣbəḥa<br>SUSANNE HUMMEL  | 35  |
| An Archaic Jewish-Christian Liturgical Calendar in Abba Giyorgis of Sägla<br>BASIL LOURIE  | 73  |
| The Old Chants for St. Gärīma: New Evidence from Gärʿalta<br>DENIS NOSNITSIN   | 84  |
| The Epistles of Niketas Stethatos: The Data of the Georgian Version<br>ALEXEY OSTROVSKY and MAIA RAPHAVA   | 104 |
| The Newly Discovered Treatise on Patriarch Nikon in the Cultural and Historical Context<br>of Its Epoch<br>SVETLANA K. SEVASTYANOVA                    | 126 |
| <b>Articles</b>  |     |
| Understanding Origen: The Genre(s) of the Gospels in Light of Ancient Greek Philology<br>and Modern Genre Theory<br>CARL JOHAN BERGLUND                | 181 |
| The Principle of Individuation in <i>Contra Eunomium</i> 2, 4 by Basil of Caesarea and<br>Its Philosophical and Theological Context<br>DMITRY BIRIUKOV | 215 |
| A Brief History of Self-Reference Notion Implementation in Byzantium<br>OKSANA YU. GONCHARKO and YURY M. ROMANENKO                                     | 244 |
| Between Tritheism and Sabellianism<br>DIRK KRAUSMULLER   | 261 |
| Gregory of Nyssa's <i>Life of Gregory Thaumaturgus</i> and the Conversion of Neocaesarea<br>BYRON MACDOUGALL   | 281 |
| Theology for Rent: Nicholas Mesarites as a Compiler of Andronicus Camaterus<br>DMITRY I. MAKAROV   | 291 |
| Identity in Difference: Substance and Nature in Leontius of Byzantium's Writings<br>TIMUR SHCHUKIN   | 308 |
| Sur l'origine des sobriquets de Jean le Grammairien « Jannes » et « Sorcier »<br>TATIANA A. SÉNINA ( <i>nonne Kassia</i> )                             | 322 |
| <b>Review Articles</b>   |     |
| Caught in Transition: Liturgical Studies, Grand Narratives, and Methodologies of the Past<br>and the Future<br>ARKADY AVDOKHIN                         | 329 |
| Temporality and a Metric for Created Natures in Gregory of Nyssa<br>BASIL LOURIE   | 340 |
| <b>Notes</b>   | 353 |
| <b>Reviews</b>   | 383 |

SCRINIUM

VOLUME 12 • 2016

BRILL

VOLUME 12 • 2016



SCRINIUM

*Journal of Patrology and Critical Hagiography*

BRILL



## SCRINIUM

*Journal of Patrology and Critical Hagiography*

### Aims and Scope

*Scrinium: Journal of Patrology and Critical Hagiography*, established in 2005, is an international scholarly periodical devoted to patristics, critical hagiography, and Church history. Its scope is the ancient and medieval Christian Church worldwide, but especially Eastern / Oriental Christianity and Christian Origins. Each volume is focused on a specific subject (covering non less than 60% of the whole volume) formulated in the individual title of each volume. The journal is published under the auspice of the St Petersburg State University of Aerospace Instrumentation.

### Editor-in-Chief

Basil Lourié, University of the Aerospace Instrumentation, St Petersburg

### Editorial Board

Pauline Allen, Australian Catholic University, Brisbane

and University of Pretoria, South Africa

Cornelia B. Horn, Freie Universität, Berlin

Andrei A. Orlov, Marquette University, Milwaukee Bernard Outtier, CNRS, Paris

Nicolai N. Seleznyov, Russian State University for the Humanities, Moscow

### Secretariat

Elena Bormotova, Montreal

Alexey Ostrovsky, Tbilisi

Tatiana Senina, St. Petersburg

### Advisory Board

Sebastian Brock, Oxford (President) – Vladimir Baranov, Novosibirsk – Alessandro Bausi, Hamburg – Kazuhiko Demura, Tokyo – Stephan Gerö, Tübingen – Robert Godding, Brussels (Société des Bollandistes) – Alexander Golitzin, Toledo (Ohio) – Getatchew Haile, Avon – Hubert Kaufhold, Munich – Robert Kraft, Philadelphia – Sergey A. Ivanov, Moscow – Marcello La Matina, Macerata – Vladimir A. Livshits, St Petersburg – Igor P. Medvedev, St Petersburg – Bernard Meunier, Lyon (Institut des Sources Chrétiennes) – Madeleine Petit, Paris – John C. Reeves, Charlotte – Gerrit J. Reinink, Groningen – Antonio Rigo, Venice – James Russel, Harvard – Samir Kh. Samir, Beirut – Michael Stone, Jerusalem – Alin Suciu, Hamburg – Satoshi Toda, Sapporo – James VanderKam, Notre Dame

### Instructions for Authors

The style guide for the journal can be obtained from the editor or from the journal's homepage at [brill.com/scri](http://brill.com/scri).

This publication has been typeset in the multilingual “Brill” typeface. With over 5,100 characters covering Latin, IPA, Greek, and Cyrillic, this typeface is especially suitable for use in the humanities. For more information, please see [brill.com/brill-typeface](http://brill.com/brill-typeface).

*Scrinium* (ISSN 1817-7530, E-ISSN 1817-7565) is published annually by Brill, Plantijnstraat 2, 2321 JC Leiden, The Netherlands, T +31 (0)71 5353500, F +31 (0)71 5317532.

### Indexing and Abstracting

Scrinium is abstracted/indexed in: SCOPUS

### Subscription Rates

■ Brill: please check the prices

For institutional customers, the subscription price for the electronic-only edition of Volume 12 (2016, 1 issue) is EUR 189 / USD 228. Print only: EUR 208 / USD 250; electronic+print: EUR 227 / USD 273. Individual customers can subscribe to the print or online edition at EUR 63 / USD 76. All prices are exclusive of VAT (not applicable outside the EU) but inclusive of shipping & handling. Subscriptions to this journal are accepted for complete volumes only and take effect with the first issue of the volume.

### Claims

Claims for missing issues will be met, free of charge, if made within three months of dispatch for European customers and five months for customers outside Europe.

### Online Access

For details on how to gain online access, please refer to the last page of this issue or visit the journal online at [brill.com/scri](http://brill.com/scri).

### Subscription Orders, Payments, Claims and Customer Service

Brill, c/o Turpin Distribution, Stratton Business Park, Pegasus Drive, Biggleswade, Bedfordshire SG18 8TQ, UK, T +44 (0)1767 604954, F +44 (0)1767 601640, e-mail [brill@turpin-distribution.com](mailto:brill@turpin-distribution.com).

### Back Volumes

Back volumes of the last two years are available from Brill. Please contact our customer service as indicated above.

For back volumes or issues older than two years, please contact Periodicals Service Company (PSC), 11 Main Street, Germantown, NY 12526, USA. E-mail [psc@periodicals.com](mailto:psc@periodicals.com) or go to PSC's website: [www.periodicals.com](http://www.periodicals.com).

© 2016 by Koninklijke Brill NV, Leiden, The Netherlands

Koninklijke Brill NV incorporates the imprints Brill, Brill Hes & De Graaf, Brill Nijhoff, Brill Rodopi and Hotei Publishing.

All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the publisher.

Authorization to photocopy items for internal or personal use is granted by the publisher provided that the appropriate fees are paid directly to Copyright Clearance Center, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, USA. Fees are subject to change.

Printed in the Netherlands (on acid-free paper).

Visit our website at [brill.com](http://brill.com)

## Notes



# The Cosmology of John Damascene and Its Antique Context

*Dmitry Biriukov*

National Research University Higher School of Economics (HSE), Research  
Nuclear University MEPhI, Saint Petersburg State University of Aerospace  
Instrumentation, Russia  
*dbirjuk@gmail.com*

## Abstract

This article is devoted to the cosmology of John Damascene. The relevant ideas from antique geocentric teachings in cosmology and natural philosophy are summarized and the proximity of Damascene's views to these teachings is assessed. My conclusion is that the cosmology presented in Damascene is the result of combining elements of Platonic, Aristotelian and Stoic teachings, with the Aristotelian elements tending to prevail. The idea of that Ptolemaic cosmology has an influence on the cosmology of John Damascene is rejected.

## Keywords

cosmology – John of Damascus – ether – elements – geocentrism

In this article I will discuss the cosmological views of John Damascene in the context of antique traditions of natural philosophy and cosmology.<sup>1</sup>

---

<sup>1</sup> The author is unaware of any publications in which the antique context of the cosmological

1. John Damascene formulates his cosmological teaching in chapters VI–VII (19–20) of the second book of his “An Exact Exposition of the Orthodox Faith.” Damascene starts with the idea of the heavens as the limits of the intelligible and sensual created world. He identifies two meanings for the notion of “heaven” in Scripture: the first (in Ps. 115:15, 16; 148:4; 2 Cor. 12:2) is “heaven” according to its ordinary understanding, corresponding to what “external philosophers” call a starless sphere. The second, following St. Basil of Caesaria, is of heaven as the “firmament,” something subtle as smoke.<sup>2</sup>

In his discussion of heaven, Damascene quotes the teachings of “some” as authoritative for understanding the nature of heaven; it is evident, that he adhered to this teaching himself. So, according to “some,” the heaven is spherical and is the highest thing out of everything on earth. Damascene connects his teaching about the heaven to the four elements – earth, air, fire and water, borrowed from antique and patristic philosophies of nature. When God created the world, he created the four elements first, alongside the heaven, and then he created all beings out of these elements.<sup>3</sup> Heaven is spatially the highest area in the universe. Fire, being the lightest element, is situated right next to it. Damascene says that fire can also be called ether.<sup>4</sup> Air is situated under fire; water under air and earth under water. Water and earth are in the middle of space, encircled by heaven and air. Heaven moves around and encircles all that is within it.<sup>5</sup>

Heaven has seven zones (ζώνη)<sup>6</sup> of “the most subtle nature” (λεπτοτάτης φύσεως), also known as the seven heavens. These are situated in hierarchical order, with a particular planet (πλάνης) corresponding to each zone. The seven planets are listed by Damascene in the following order (from furthest to

---

teaching of John Damascene is studied. But there are some works where some aspects of this subject are touched upon, rather briefly, or an overview of John Damascene's cosmology is given: A. Tihon, “L’astronomie à Byzance à l’époque iconoclaste,” in: *Science in Western and Eastern Civilization in Carolingian Times*, ed. P. L. Butzer, D. Lohrmann, Basel, 1993, pp. 181–203; A. Louth, *St John Damascene: Tradition and Originality in Byzantine Theology*, Oxford, 2002, pp. 126–129; E. Nicolaidis, *Science and Eastern Orthodoxy. From the Greek Fathers to the Age of Globalization*, transl. by S. Emanuel, Baltimor, 2011, pp. 46–47.

2 See Basil of Caesarea, *Hex.* I, 8, in *PG* 29, col. 21a; Basile de Césarée, *Homélies sur l’hexaéméron*, ed. S. Giet (SC, 26bis), Paris, 1968<sup>2</sup>, p. 120; this kind of heaven is mentioned in Gen. 1:6–8 (cf. Is. 51:6).

3 John Damascene, *Exp. fid.* 2, V (19).

4 Ibid., 2, VI (20): 25 (pagination according to the edition: *Die Schriften des Johannes von Damaskos*, vol. 2, *Expositio fidei*, ed. B. Kotter (Patristische Texte und Studien, 12), Berlin, 1973).

5 Ibid., 2, VI (20): 31–32.

6 Ibid., 2, VI (20): 33.

nearest in relation to the earth): Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon.<sup>7</sup> Damascene mentions that some of the planets wander: sometimes they move in the opposite direction to that of other heavenly bodies, i.e. from west to east.<sup>8</sup> Damascene also formulates another view, according to which the rotation of the heaven drags the planets and stars, thus conditioning their rotation.<sup>9</sup>

According to Damascene, all heavenly bodies are non-animated, composite and subject to destruction. Like Basil of Caesarea,<sup>10</sup> Damascene rejects the idea that the luminaries are the light itself; according to him, they are only the containers for light.<sup>11</sup>

Damascene also mentions the 12 signs of the Zodiac, which are composed of stars. The seven planets move through these signs. The Sun spends 1 month in each sign whilst the Moon, situated below the Sun, walks through all 12 Zodiac constellations every month.<sup>12</sup> Here Damascene also mentions the equinoxes and the length of seasons.<sup>13</sup>

Damascene seemingly disapproves<sup>14</sup> of the rival cosmological picture of the world according to which heaven is a hemisphere,<sup>15</sup> a view in which he is supported by John Chrysostom *inter alia*.<sup>16</sup>

2. Below I will try to explain the context of the cosmological ideas found in John Damascene within the frame of antique traditions of natural philosophy and cosmology. For this purpose I will offer a short overview of antique geocentric cosmologies as they are relevant to, or mentioned in, Damascene's cosmology. I will start with Plato.

Plato developed a geocentric cosmological doctrine. According to Plato, seven luminaries are established at the seven spheres (circles). In *Timaeus* and the 10th chapter of *State*, following the Pythagorean principle, Plato associates each sphere with a certain number, so that together they create the harmonious

7 Ibid., 2, VII (21): 45–51.

8 Ibid., 2, VI (20): 37–41; VII (21): 37–41.

9 Ibid., 2, VI (20): 47–48; VII (21): 41–42.

10 Basil of Caesarea, *Hex.*, VI, 2, in *PG* 29, col. 121; Basile de Césarée, *Homélies sur l'hexaéméron*, pp. 334–336.

11 John Damascene, *Exp. fid.*, 2, VII (21): 34–36.

12 Ibid., 2, VII (21).

13 He makes an error of a few days in the determining the spring equinox and the length of seasons (Tihon, "L'astronomie à Byzance à l'époque iconoclaste," pp. 182–183).

14 "Ἑτεροι δὲ ἡμισφαίριον τὸν οὐρανὸν ἐφαντάσθησαν ἐκ τοῦ τὸν θεηγόρον Δαυὶδ λέγειν ...

15 John Damascene, *Exp. fid.*, 2, VI (20): 51–52.

16 John Chrysostom, *In Isaiam* 40, 22; *In Isaiam prophetam interpretatio Sancti Joannis Chrysostomi archiepiscopi Constantinopolitani*. Nunc primum ex armeno in latinum sermonem a Patribus Mekhitaristis translata [by A. Tiroyan], Venice, 1887, pp. 267–269.

structure of all beings.<sup>17</sup> In relation to the order of luminaries Plato follows tradition, as witnessed by Anaxagoras and the Pythagoreans:<sup>18</sup> according to him, the luminaries are situated in the following order approaching the earth: Saturn, Jupiter, Mars, Mercury, Venus, Sun, Moon. It is notable, that the number of spheres in Plato corresponds to the number of planets, i.e. each planet corresponds to its own, and only its own, sphere.

Eudoxus of Cnidus followed to the program of “saving the phenomena”<sup>19</sup> which was possibly formulated by Plato in order to explain the visible irregular movements of the heavenly bodies (the so called “loops”),<sup>20</sup> contradicting the philosophical axiom of the perfect regular movement of luminaries in cosmos. Keeping this in mind, Eudoxus developed a doctrine, assuming the existence of 26 spheres in cosmos, in order to describe the peculiarities of the planets movements on the firmament. Eudoxus did this in his treatise “On Velocities,” the content of which we know partly from the 12th book of Aristotle’s *Metaphysics* and partly from Simplicius’ commentaries to the Aristotelian treatise “On Heaven.”<sup>21</sup> In Eudoxus’ system the centre of all these spheres coincide with the centre of the earth globe.

The spheres are situated inside each other; they rotate around different axes with different velocities. In this system the movement of each planet is analyzed as a plurality of movements along the orbits of adjoining spheres. For Sun and Moon Eudoxus introduced three spheres for each, for each other planet – four. Eudoxus’ and Plato’s systems are both geocentric. Eudoxus lists the luminaries in the same order as Plato.

Aristotle followed the principles of Eudoxus’ system in his teaching on the 7 luminaries. Unlike Eudoxus – who didn’t discuss the correspondence of spheres and planets, as his model was mathematical – Aristotle imparted ontological status upon these spheres.

Also Stagirite put the cosmological views into coherent philosophical context.<sup>22</sup>

<sup>17</sup> Plato, *Timaeus*, 35c–36a.

<sup>18</sup> See: J. Dreyer, *History of Astronomy from Thales to Kepler*, New-York, 1953, pp. 44–45, 168.

<sup>19</sup> About the program of “saving the phenomena” see: L. Zhmud, *The Origin of the History of Science in Classical Antiquity*, Berlin – New York, 2006, pp. 86–87, 231, 271–275.

<sup>20</sup> I.e. the anomalies in the movements of the heavenly bodies when they firstly orbit in the same direction as Moon and Sun and then change their orbit and start to move in the opposite direction, after which they change direction again and so on.

<sup>21</sup> See: Aristotle, *Met.*, XII, 8, 1073b–1074a; Simplicius, *In de caelo*, in: *Simplicii in Aristotelis de caelo commentaria*, ed. J. L. Heiberg (Commentaria in Aristotelem Graeca, 7), Berlin, 1894, pp. 493–506.

<sup>22</sup> I will not touch upon the foundations of the teaching of Aristotle on cosmology and

Here we should mention the theme of the four elements which was borrowed by Aristotle from Empedocles: earth, water, air and fire. Earth and water are heavy elements, they are situated below, constituting our Earth; correspondingly, air and fire are light elements and are situated above. The natural movements of all of these elements are directed in a straight line towards the centre of the universe. The final goal of the natural movements is for these elements to find their natural position. Therefore, for Aristotle, the sublunary world is a central sphere, corresponding to the natural position of the element of earth. Around this sphere the three spheres are situated, corresponding to the three other elements – water, air and fire.

For the heavenly world the natural motion is circular. This movement cannot be connected to any of the four elements, for the natural movements of all of them are directed in a straight line. In Aristotle's system this circular movement is connected with the fifth element – ether, to which such circular motion is inherent. Unlike the natural movements of the four other elements, which have the goal of reaching their natural position, the natural movement of ether is endless.<sup>23</sup> Therefore, according to Aristotle, the area between the sphere of immovable stars and the Moon is the domain of ether. Fire, or rather hot and dry fire vapour, adjoins it. Drawn along by the heaven, it creates warmth. Air, water and earth follow fire.<sup>24</sup> Aristotle says that stars consist of ether,<sup>25</sup> and not of fire, as some state – on the basis that they consider the highest body in the universe to be fire.<sup>26</sup>

We should note that Aristotle's teaching about ether was reworked by the Stoics.<sup>27</sup> The Stoics also considered the substance of the stars to be ethereal, and attributed circular movement to ether. But they refused to consider ether a special element and identified it with the creative fire, opposing it to common fire.<sup>28</sup> Proclus developed his cosmological teaching from the teaching of Aristotle; but the place of Aristotelian ether is occupied by fire in Proclus as well as in the Stoics. Following Plato,<sup>29</sup> Proclus taught that the heaven consists

---

philosophy of nature – his teaching about the unmoved first mover and the first movers affecting stars and planets; I will only touch upon what is relevant in the context of the cosmological teaching of Damascene.

23 Aristotle, *De caelo*, I, 2–5.

24 Aristotle, *Met.*, I, 3.

25 Aristotle, *De caelo*, II, 7, 289a13ff.

26 For example: Plato, *Timaeus*, 40a.

27 See: *Stoicorum veterum fragmenta*, coll. I. ab Arnim, Stuttgartiae, 1964, vol. II, fr. 527, 555, 571, 579, 580, 593, 596, 601, 619, 642 et al.

28 See: *Stoicorum veterum fragmenta*, vol. II, fr. 596, 664, 1050 et al.

29 See note 26.

of fire. Following Aristotle, Proclus understood the element corresponding to the heavenly sphere as a simple element, to which natural circular movement, which is eternal, is inherent.<sup>30</sup> From this it follows that Proclus understood this fire very similarly to the Aristotelian ether.

Coming back to Aristotle, we should notice that, developing the system of Eudoxus, Aristotle stresses the problem of the interaction of spheres. This problem is apparently connected to the way in which, for Aristotle, ascription of ontological status to the spheres determines the movements of planets. Proceeding from the real existence of the spheres, and not allowing for the existence of emptiness, Aristotle assumes that each sphere must influence the next and drag it along with itself; to preserve the independence of the rotating motion of the planets Aristotle, in each set of spheres, introduces spheres rotating in the opposite direction to compensate for the rotation of the others. Thus, the total number of spheres corresponding to planets in Aristotle equals 55.<sup>31</sup> With respect to the position of luminaries, Aristotle follows the established scheme used by Plato and Eudoxus.

However, the systems of Eudoxus and Aristotle did not explain all astronomical phenomena, for instance, the change in the brightness of planets as they move across the sky; or the loop-like movement of planets, which it failed to explain satisfactorily. This was the reason for Ptolemy, in his *Syntaxis* (*Almagest* in Arabic translation), to develop a fundamental cosmological system on the basis of the astronomical observations and astronomical-cosmological program of Hipparchus. He considerably modified the existing systems, introducing three additional principles. These are the principles of equant, eccentrics and epicycle. The principles of equant and eccentric assume that the Earth is situated not in the centre of orbits but in a displaced (eccentric) position. The principle of eccentric aims to explain changes in the brightness of stars; the principle of equant – to explain the changes in the angular velocity of the planets in the course of the year. According to the principle of epicycles it is accepted that the trajectory of a planet is composed of the trajectories of different circles, i.e. that each planet rotates in a circle (epicycle), the center of which rotates along another circle (deferent), with the centre of the deferent in turn being able to rotate along a further circle and so on. The principle of epicycles is intended to explain the loop-like movements of planets.

Finally, we should note that in the Hellenistic period, at least as far back as Cicero and Plutarch, the traditional understanding of the order of planets was changed: Mercury and Venus were now positioned between the Moon and

30 Proclus, *In Timaeum*, III, 114; Philoponus, *De aet. mundi*, 523E.

31 See Aristotle, *Met.*, XII, 8.



Sun. The ordering, from furthest to nearest, was thus as follows: Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon. This was connected to Stoic influences; at least Cicero<sup>32</sup> mentions Diogenes of Babylon in this context. Stoics, in turn, may have borrowed the order from Babylonia. This order of planets was eventually accepted by Ptolemy, Cleomedes, Pliny, Pseudo-Vetruvius, emperor Julian and other authors.<sup>33</sup>

3. Coming back to the cosmology of Damascene, and keeping in mind what was said above, we can note the following. In the cosmological teaching described by Damascene in his *An Exact Exposition of Orthodox Faith*, it seems to me that traces of Aristotelian, Platonic and Stoic lines of thought may be discovered, alongside a particular prevalence of the first.

Before I describe in which respects Damascene followed these lines, the geocentric character of Damascene's cosmology should be noted. In this respect he follows both the most prominent teachings of antiquity (from Plato to Ptolemy) and the preceding patristic authors. The pioneering cosmological ideas of Heraclides of Pontus and Aristarchus of Samos, predicated upon a heliocentric cosmological system, were practically unknown in patristic thought, and to John Damascene in particular.

Aristotelian thinking is manifested in Damascene first of all in the way that his cosmological discourse is connected with the doctrine of elements. Damascene follows Aristotle in describing the hierarchy of spheres in the cosmos according to the ordering of the elements: earth is below, then water above it, air above water and fire above air. Unlike Aristotle, Damascene distinguishes an additional heavenly area above fire. This area corresponds to the Aristotelian sphere of ether, according to its position (above fire). Although Damascene does not mention a special element corresponding this heavenly sphere, it is nevertheless implied in his system, as the heavenly sphere is listed in the same row as the spheres corresponding to fire, water and earth. In Damascene, the element corresponding to heaven would be – like the Aristotelian ether – a “fifth element”, i.e. the element different from the traditional elements of fire, air, water and earth. Unlike Aristotle, Damascene does not single out ether as a separate element, but states that the element of ether is the same as the element of fire, following Stoic thought in this respect. However, unlike the Stoics or Proclus, Damascene does not think that the heavenly bodies consist of fire.

As concerns Damascene's teaching on planets and their corresponding spheres, here he instead follows Platonic thinking, in a move quite archaic for his time. This is manifested in the fact, that, although Damascene is informed

32 Cicero, *De div.*, II, 43.

33 See: Dreyer, *History of Astronomy from Thales to Kepler*, pp. 168–169.

about the uneven loop-like movement of the heavenly bodies across the sky, in the cosmological system he refers to each planet as corresponding to *one* zone (sphere) – as in Plato's system, and not several zones (spheres), as proposed by Eudoxus and Aristotle, in order to explain these uneven movements of the heavenly bodies.

However although Damascene used some important aspects of Platonic and Aristotelian cosmologies, in respect to the order of luminaries, he followed not the order usual for Plato and Aristotle, but that typical for the Hellenistic age (as in Ptolemy, Cleomedes, Pliny, Pseudo-Vitruvius, emperor Julian et al.): Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon.

Concerning the Ptolemaic cosmological innovations, I fail to see traces of Ptolemaic thought in Damascene's teaching. Equant and eccentric principles of motion, –predicated upon the displacement of the Earth in relation to centres of planetary orbit –are not, it seems, present in Damascene. On the contrary, Damascene mentions that earth and water are in the middle, i.e. in the centre of the universe, as was stressed by Aristotle. In this connection, assertions that the cosmological system formulated by Damascene has elements of Ptolemaic cosmology seem unsubstantiated. This assertion probably goes back to the commentaries on *An Exact Exposition of Orthodox Faith* by the first editor of this treatise, M. Lequien.<sup>34</sup> John Damascene is described as a follower of the Ptolemaic cosmological system by Andrew Louth<sup>35</sup> who refers to the order of planets described by Damascene. As I have said, the order of planets in John of Damascus is the same as in Ptolemy, but this does not mean that he follows his cosmological system in this respect, as this order was widespread in many Hellenistic authors and was not specific to Ptolemy's teaching.

Finally, if we ask the question of the ontological status of the zones/spheres corresponding to planets in John Damascene, the way in which he discusses this gives us no reason to doubt that he understood these zones ontologically in the Aristotelian manner, and not only as a mathematical model of the movement of planets.

Thus, we may conclude that the cosmology of John Damascene absorbed elements of different antique teachings. In his exposition of cosmological issues Aristotelian, Platonic and Stoic traditions may be distinguished, thus giving us an idea of the character of knowledge in matters of natural science and natural philosophy in the age of John Damascene.

34 St Joannis Damasceni *Opera omnia quae extant...*, ed. M. Lequien, Delespine, 1712.

35 Louth, *St John Damascene*, p. 128.