

Article

Transitions in Patristic Cosmology: From Cosmophobia to Universe-(Re)Making

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Abstract: The field of Patristics, or early Christian and Mediaeval Studies, traditionally works along the lines of historical and literary criticism. But this method is not always useful, especially when it comes to complex objects and circumstances. No wonder the current trend of replacing it, more often than not, by interdisciplinary frameworks. The article begins accordingly by reviewing three interdisciplinary frameworks, namely, the “socio-historical method”, “Deep Time”, and archaeological theorist Roland Fletcher’s “transitions”, highlighting their suitability for a comprehensive approach to Patristic cosmology. Here, cosmology should not be taken in the narrow sense of contemporary science. It means both a way of representing reality—a worldview—and a way of inhabiting the world. The present article analyses the evolution of the early Christian and mediaeval perception of the environment and the cosmos in Greek sources, pointing to successive transitions from apprehension (cosmophobia) to a keen interest in understanding nature to the thought that holiness represents a universe-(re)making agency. It addresses relevant historical and social circumstances, but proposes that the above transitions were triggered by internal or existential factors as well, and not only external, thus complementing Fletcher’s outline, which focuses upon external catalysts, such as economy and technology.

Keywords: ambiguous perceptions; cosmic impact; environmental impact; holiness; interdisciplinary studies; optimistic worldview; pessimistic worldview; Patristic cosmology



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1. Methodological Prolegomena

For the purposes of understanding the cultural, historical, intellectual, and social ramifications of the topics they discuss, contemporary humanities scholars, including Studies in Religion researchers, often adopt interdisciplinary approaches. In a similar manner, the scholars of early Christian and mediaeval thinking, including of Patristic studies, which are relevant here, implement methods from various fields (Ashbrook Harvey and Hunter 2008; Esler 2017; Mitchell and Young 2006; Parry 2015). Sometimes, new frameworks emerge from this methodological crossbreeding, of which the “socio-historical method” is currently the prevalent approach (Slade 2020; Frachetti et al. 2023). This method tends to replace the reductionist “historical-critical” preferences of previous generations. It considers the complexities of religious phenomena through a multifocal lens (economics, material culture, social frameworks, etc.) that conduces to comprehensive and nuanced understandings. This approach is extremely useful for my endeavor to examine the intellectual quantum leaps, as it were, of the early Christian and mediaeval thinkers—also known as Patristic authors—in regard to representing the world and the function of their communities within the grand scheme of things. Equally useful is the “Deep Time” approach, which studies cultural, historical, religious, and social evolutions against the backdrop of environmental, planetary, and cosmic realities (Buikstra 2019; Glikson and Groves 2016; Ialenti 2020). In what follows, I exercise along the lines of these two interdisciplinary methods, which complement each other, but I do so tacitly, without making recourse to their specialized literature. As far as I can tell, that literature does not engage the topic under consideration.

What makes necessary this combined approach is the scope of my analysis. Specifically, the early Christian and mediaeval thinkers—together with the communities to which they belonged—did not locate their experience either primarily or exclusively within built environments. As we have known for a while now, corresponding to most religious communities of past ages, Christians lived in the natural world, in the cosmos, not only within socio-historical contexts (Eliade 1959, pp. 17, 62). Theirs was a “world-accepting” culture, to paraphrase Albert Schweitzer (Schweitzer 1998, pp. 150, 202). Archaeologists have established that the early Christian experience included a “web of relations” where the human, the manufactured, and the environmental belonged together (Caraher and Pettegrew 2019, pp. 22–23). True, Christians viewed themselves as not belonging anywhere, but they nevertheless dwelt in the world and believed that their very presence impacted the earthly environment and the cosmos in its entirety (Costache 2021, pp. 27–60, 329–64). Accordingly, their attitude to culture, society, and the values derived from their being in the world (Young 2004, p. 100). It follows that to examine Patristic representations of the natural world is of the essence for grasping related social and cultural attitudes. Against this backdrop, the present analysis requires both the socio-historical method and the Deep Time approach.

It is noteworthy that studies of Patristic cosmology, understood as a way of representing reality and the manner of inhabiting the world, are not entirely missing (Blowers 2012; Costache 2021; Köckert 2009; Lollar 2013; Rizzerio 1996). This is an important development, a point of departure from the customary view of the ancient and the mediaeval “world” as culture, material or otherwise, a view that ignores the world as perceived and inhabited by the believers of ages past (see, e.g., Esler 2017, where the world as cosmos receives no attention). The present study draws upon the contributions of the scholars that represent the positive development mentioned just above. It does so, however, through the lens of interdisciplinary methods—such as the socio-historical and the Deep Time approaches—which most of those scholars have not tested.

The method I follow here engages yet another element, Roland Fletcher’s idea of “transitions” (Fletcher 1995, 2019), which represents a special case of socio-historical analysis. Fletcher engaged archaeological, economical, and demographic data for the assessment of the history of civilization after the last ice age. This method allowed him to identify three postglacial transitions or revolutions—agricultural, urban, and industrial—that occurred as a result of factors such as technological innovation, land use, and social dynamics. The same interdisciplinary lens makes possible to predict with a high degree of probability the upcoming fourth civilizational shift and, depending on the accuracy of our intuition regarding technological advancement, further evolutions in the far future (Fletcher 2019, pp. 176–77). Therefore, the transitions are about considering the past for the purposes of understanding “where we are today, and where we are headed next” (Fletcher 2019, p. 171). The signs of an imminent transition are already obvious in the materials we use and the technology at hand. Specifically, Fletcher believes the fourth shift will represent the outcome of combining information technology and organic life, which will pave the way for the colonization of the galaxy without the aid of machines (Fletcher 1995, pp. 3–8, 16–17; Fletcher 2019, p. 178).

Of interest, here, is Fletcher’s view of the future as bringing with it something I would call spiritual transitions. By spiritual, I understand humankind’s gradual transformation as a species from within, existentially, not only due to its technologically mediated interaction with the world. This transformation, I propose, will lead to a corresponding change of the cosmos, also from within, through the agency of the spiritually changed humanity. In saying this, I draw on some of my earlier research (Costache 2015, pp. 381–85; Costache 2016, pp. 28–33; Costache 2021, pp. 350–57). The nature of this transformation is not beyond our intuition. To use an analogy from physics, humankind’s and the world’s “regime” will change as the state of a substance does. The early Christians referred to this change in terms of a diaphanous materiality of the human body and of the world itself in the eschatological future (1 Corinthians 15:40–44; Revelation 21:10–13, 18–26), a glorious transformation that

will begin with humankind, or rather “God’s children” as its representatives, and will then permeate the whole of the Creation (Romans 8:19–23). Fletcher does not refer to future transitions as spiritual and as effected from within, existentially. He discusses contextual or external factors, including the impact of technology upon human nature and the way future humans will master the space–time continuum. Nevertheless, while the two of us contemplate transformation from different vantage points, the idea is the same, at least in regard to outcomes. Taken together, Fletcher’s views and my own complement each other by considering future evolutions—human and cosmic—as prompted by internal and external factors. And there is an obvious point of convergence between our views, that is, the conviction that humanity undergoes a process of becoming, from an environmentally managing agent, a cosmogonic one, for want of a better word. In short, and considering this matter panoramically, humankind will progress from the growing capacity to use the universe’s stuff to the capacity of making universes, or at least of remaking them—perhaps along the lines of what physicists imagined in regard to the final anthropic principle (Barrow and Tipler 1986, pp. 658–77).

It is within complex frameworks such as the above that the present study tackles matters of the Patristic representation of reality, or cosmology, in the Greek-speaking Christian tradition. My discourse unfolds in two steps. First, and constituting the largest part of this article, I summarize early Christian perceptions of reality (from the first to the fifth century), amounting to a series of cultural shifts from cosmophobia to appreciating the world to constructive approaches to it. This summary highlights the impact of contextual factors upon the early Christian mindset, such as historical and social. Second, I show that—alongside the circumstances that prompted these successive changes of perception—more elusive factors were at play, such as experiences of spiritual transformation, which inspired thoughts about humankind’s cosmogonic potential. Thoughts to that effect are found in sources from the early Christian centuries until later in the Byzantine era. Here, as mentioned above, the term “transitions” is deployed in Fletcher’s dynamic sense, but it foremost refers to a process of inner transformation whose reverberations are then felt far and wide. In addressing these matters, I hope to show that the intuitions of certain Patristic authors about the nature of reality and humanity’s cosmic function anticipate current ways of thinking. To understand these intuitions requires, for that matter, interdisciplinary examination.

2. Early Christian and Mediaeval Representations of Reality

The early Christian and the mediaeval views of the cosmos and of the Christian community within it were overall characterized by confidence and optimism. What must have inspired this attitude were Scriptural passages such as the narrative of the star that marked Jesus’ birth (Matthew 2:1–2,9–10) and his proclamation as Logos, Creator of the universe (John 1:1–3), or as Lord who holds all things together (Colossians 1:15–17; Hebrews 1:1–3). Since their Teacher was the “head” or the Master of all, who bridged the gaps between things visible and invisible (Colossians 1:18–20), to the extent that even cosmic phenomena such as the nativity star paid him homage, Christian disciples had nothing to fear in, and from, the material world (John 16:33; Romans 8:38–39; cf. John 14:30 on the “ruler of this world”). This understanding did not make them unrealistic about the complexities of nature, however, including its dangerous side (Costache 2022a, pp. 13–17; Hall 2002, pp. 31–32), but in principle their worldview remained positive.

This optimistic worldview was enshrined in the visual culture of those times—from the second-century acronym ΙΧΘΥΣ, together with its corresponding symbolic rendition as a fish in the art of Rome’s catacombs, to the zodiacal iconography of Jesus Christ *Pantokrator* (“he-who-holds-the universe”) of the later Byzantine centuries. The catacomb acronym represents a doctrinal statement about Jesus’ identity, which in Greek reads Ἰησοῦς Χριστός Θεοῦ Υἱός Σωτήρ, meaning “Jesus Christ, God’s Son, Savior” (Daniélou 1964, pp. 50–51). Christians rendered this statement both in its acronymic form, ΙΧΘΥΣ, which forms the Alexandrian Greek word for “fish” (ἰχθύς), and by drawing a fish. What is interesting about this acronym is the hidden rationale behind it. The identity of Jesus could have been

phrased in other ways, and the New Testament gives various possibilities (Philippians 2:5–11; Matthew 16:16; John 20:28; 1 Timothy 3:16). The fact that in the second century Christians had set on the acronym ΙΧΘΥΣ for proclaiming his identity, together with its visual representation as fish, denotes a complex worldview (Hegedus 2007, pp. 268, 363), along the lines of what I have sketched above. In short, their way of looking at reality centered upon Jesus as Creator and Master of the universe, his birth being considered a crucial cosmogonic event. After all, a star marked it. What is interesting is that Jesus' assumed time of birth corresponds to the transition to a new astrological age, from Aries/Ram to Pisces/Fishes, which age, given the precession of the equinoxes, would expand for about 2150 years (MacKinnell 2011, pp. 77–97). It stands to reason that the early Christians chose the symbol of the fish as a means for communicating their faith convictions within the cultural context of that era. More precisely, they chose a statement about Jesus' identity, ΙΧΘΥΣ, that matched the new zodiacal age of Pisces. And, by combining Jesus' identity with the zodiacal transition in the symbol of the fish, Christians signaled their interest in matters cosmic and their view of themselves as agents of this new astrological age.

The same conviction led, after many centuries, to the iconographical depiction of Jesus as the center of the universe, *Pantokrator*, with the Byzantines representing him surrounded by disciples, angels, and the zodiacal signs (Lemcool 2020, pp. 479, 486; Tutkovski 2010, pp. 282, 284–86), sometimes only by the last (Barral i Altet 2015, pp. 231–32).

2.1. A Time of Ambiguity

But the Patristic views of the cosmos are not of one piece. Differences occurred and, at times, the optimistic stance discussed above was abandoned for the contrary view (Costache 2021, pp. 11–14). In what follows, I focus primarily upon attitudes recorded from the early second century to the early fifth century, corresponding to the time frame of Late Antiquity. Byzantine thinkers, such as John Climacus (d. ca 649), Maximus the Confessor (d. 662), and Symeon the New Theologian (d. 1022), will make cameo appearances. Within that span of history are obvious, as we shall soon discover, successive shifts of perspective. These went from cosmophobia, or nervous apprehensions about the world in the sense of E. R. Dodds' "age of anxiety" (Dodds 1990), to appreciation for the earthly environment and to a desire to comprehend the universe and its natural workings along the lines of "natural philosophy" (as science was known at the time). What caused these attitude shifts are social, historical, economical, and cultural circumstances—which later were joined by technological factors, as is the case of church architecture, which had a profound impact upon the Christian worldview in the Middle Ages (Ivanovici 2016, pp. 213–16).¹ These factors worked as external catalysts of certain internal processes pertaining to the Christian ethos, primarily the pursuit of holiness in the sense discussed by Peter Brown (Brown 1983). In return, we shall see below that the relevant internal processes, amounting to existential transformations, conditioned Christians' *manner* of inhabiting the world, which they understood as having existential and environmental resonance. The impact of such processes remained unnoticed for a time, but was not altogether missed. The relevant circumstances related to a major turn in Roman politics, from persecuting Christianity for a couple of centuries to proclaiming it imperial religion in the fourth century (Hall 2006, pp. 470–72; Leadbetter 2017, pp. 220–26, 235–40; Siker 2017, pp. 207–12). This turn encouraged Christians to overcome their occasional suspicion and reluctance, mainly caused by persecution and social marginalization, and to adopt, decisively, the positive outlook discussed in the foregoing.

I must now turn to the early Christian shifting attitudes to the world, understood as humankind's immediate environment and as the cosmos at large. Several main phases can be identified.

In the first decades of their history, despite the New Testament materials reviewed above and the belief that they represented the new astrological age, Christians were ambiguous about things of the world. The reasons prompting their prudence were complex, ranging from the conviction that the eschatological times and the end of all things were near

(1 Corinthians 16:22; Revelation 22:10) to the psychological impact of Roman persecutions (Romans 8:36; Revelation 13:5–8), as shown earlier. There was no point in caring about a world that was about to expire, especially one whose representatives, the Roman authorities, were hostile. No wonder even an author who ultimately nurtured a positive worldview, the anonymous writer of *Letter to Diognetus* (the second half of the second century) (Costache 2021, pp. 52–58), gave voice to the shared sentiment of his coreligionists: “Christians sojourn in a perishable world, but await heavenly imperishability” (using Ehrman ed. [Loeb, vol. 1], 6.8 [My trans.]). Awareness of the ephemeral character of the world is apparent in this statement. By contrast, the world to come, “heavenly”, or rather eschatological, is undying. This is a relatively pessimistic stance, signifying that consistent values and permanent happiness are impossible in the world. This conviction led many early Christians to see themselves “within the world as though arrested in a prison” (*Diognetus* 6.7). In analyzing these passages, elsewhere I discussed a series of cultural factors that influenced this view of things, from the ontological pessimism of contemporary ways of thinking to the association of the world with dubious, unethical practices (Costache 2021, pp. 48–52). Of further note is the sense of precariousness many Christians experienced in a cosmos that was largely unknown, dangerous, and uncontrollable (Allen and Neil 2021, pp. 72–86; Braudel 1996, pp. 35, 38; Horden and Purcell 2000, pp. 298–341; Izdebski et al. 2016).

2.2. The Optimistic Turn

What we found out so far is that the early Christian movement was ambivalent about the world, complexly understood as the broader society, the natural environment, and the cosmic backdrop. Apprehension was not the dominant sentiment; no wonder a positive worldview incrementally replaced it. This optimistic turn led to a different perception of animals and their habitats, usually considered dangerous (Grant 1999; Lazaris 2016). This counts as the first cultural transition of the Christian worldview. True, several authors, from Ignatius of Antioch (d. ca 110) to the writer of *Diognetus* himself, and from Irenaeus of Lyon (d. ca 200) to Clement of Alexandria (d. ca 215), had been already presenting the cosmos as a welcoming home (Costache 2021, pp. 2–3, 6, 12, 16, etc.). Even when they deplored the dire circumstances Christians experienced, their message was unequivocally one of hope. These examples attest to a positive attitude even before the change in Roman politics, undoubtedly motivated by pastoral rationale, that is, to ease the anxiety believers experienced at that time (Costache 2021, p. 61). To that end, they guided their audiences towards considering the world through the lens of familiar images, such as the liturgy, the sacred hymns, and the choirs of the congregation.

For example, Ignatius compared the musical harmony of the church assembly and the equally melodious celestial scenery that orbited the “new star” of the Logos incarnate. As a result, in liturgical fashion, “the other stars, together with the sun and the moon, became a chorus for the (new) star whose light surpassed all the others” (*Letter to the Ephesians* [ed. Ehrman (Loeb, vol. 1)], 19.2). For Ignatius, the Church and the cosmos mirrored each other—a perception that Irenaeus and Clement shared and developed. Specifically, they viewed the universe as a divinely written melody and as an orchestra and a chorus that interpret the score. Not unlike contemporary cosmologists who represent the universe as music,² these early Christian authors depicted the cosmos as melodiously attuned. For instance, Irenaeus pointed out that when we consider “the many and various” parts of the cosmos “together with the whole of the Creation, they are harmonious and consonant”, they make “one harmonious melody”, the way the strings of the lyre do (Irenaeus, *Against the Heresies* [eds. Rousseau and Doutrelleau (Srces Chrét. [=SC] 294] 2.25.2). In the same vein, and marking a step forward in the theological grasp of reality, Clement mentioned the “Logos of God” who “together with the Holy Spirit brings to harmony this world and the small cosmos, that is, the human being with its soul and body”, and so “plays hymns to God on this polyphonic instrument” (Clement, *Exhortation to the Gentiles* (ed. Mondésert [SC 2] 1.5.3). Melodic or rather liturgical imagery was instrumental towards representing the world as a welcoming home for everyone—including Christian believers—and as

a theologically meaningful space (Costache 2021, pp. 65–76, 77–80, 83–96). To measure the impact of this strategy in terms of easing the mind of believers is impossible. What matters, however, is that this approach marks a clear turn towards a positive Christian worldview.

But was the inherent optimism of the Christian mindset, earlier discussed, sufficient for prompting this development? I would suggest that it was not, and that other factors were at play, too. What helped these authors to overcome the reluctance of some quarters is the doctrine of Creation, in the light of which the world, no matter how mysterious and threatening, is God’s dwelling (Blowers 2008; Blowers 2012, pp. 67–78; May 2006). It must have also been helpful that Philo (d. ca 50 CE), the honorary church father of early Christianity, paved the way for this shift by crossbreeding Pythagorean and Platonic cosmology with the liturgical rhythms of Alexandria’s first century CE synagogues (Ferguson 2019; Runia 1993, pp. 37–43). This cultural intersection generated a sense of the universe as familiar and meaningful for believers.³ Either way, the relevant outcome of this shift of perception was an increasingly optimistic assessment of the world. It should not come as a surprise that John Chrysostom (d. 407) could depict the earthly environment in a poetically endearing fashion. In his words, the earth “has become mother and nurse for us. It is from it that we receive food and find enjoyment in all other things. To it we shall return, since for us it is both homeland and tomb” (*Homilies on Genesis* [Patr. Graec. vol. 53] 9.77.26–30). This positive stance illustrates what I consider a Patristic variant of anthropic cosmology (Costache 2021, pp. 344–49, 357–63).

2.3. Contemplative Approaches

This optimistic turn boosted the interest of Christians in understanding the universe, leading to the second cultural transition, or major shift of perception. At first, they adopted and adapted classical systems of nature contemplation (Wilson Nightingale 2004), developing methods that combined established approaches and elements pertaining to the ecclesial ethos. Then, they began to consider reality through multifocal, interdisciplinary lenses, after the fashion of natural philosophy, but in conversation with the Scriptural doctrine of Creation (Wirzba 2016). This second shift entails advancement from accommodating a variety of viewpoints on the cosmos—from philosophical to Scriptural and from scientific to theological—to actively exploring it. Let me detail the elements of this transition.

The melodic depiction of the cosmos, earlier discussed, presupposes contemplative undertakings that certain early Christian thinkers exercised with assiduity. One cannot grasp melodious or meaningful patterns without reflecting on nature—as Abraham did, in Clement’s rewriting of Genesis 22:3–4, by taking in “the sight of beautiful things” all around him, for example (*Stromata* [eds. Stählin et al. (Griech. Christ. Schrift. 15)] 5.11.73.2–3)—without comparing the complex world of liturgical music and the ordered universe. No wonder, very soon, Clement and, in his footsteps, Origen of Alexandria (d. ca 253), felt the need to develop distinctly Christian forms of nature contemplation. Both admired Philo, more or less openly, emulating his interest in the cosmos and in the available natural sciences (Runia 1993, pp. 132–83; Scott 1991, p. 104). And, like him, they considered scientific information integral to all contemplative undertakings. But they made clear that, to become theologically meaningful, a further step is required, namely, hermeneutic deciphering (Blowers 2012, pp. 315–35). Thus, the world must be interpreted just as Scripture does. To articulate a theological worldview, in fact, Scripture itself has to be deployed as an interpretative tool of nature—or what Blowers (2002) calls seeing the world in the mirror of Scripture. But the use of Scripture as a hermeneutical lens was insufficient for an insightful contemplation of reality. Always in Philo’s footsteps (cf. *On the Contemplative Life* [ed. Colson (Loeb)] 8), Clement and Origen considered the holiness of the interpreter, or the interpreter as a holy person, essential for the contemplation of nature (Blowers 2012, pp. 316–18; Costache 2021, pp. 113–15, 121–23, 138–39). I will not delve much into this matter at this stage, apart from highlighting the role of the holy person as inherent to the early Christian way of relating to the world (Brown 1971, 1983). The figure of the holy person heralds the most radical shift—transformation—to which I shall turn in due course.

Before that, a few words about the method of nature contemplation are in order. Origen gives a straightforward description of the method in regard to Scriptural interpretation, but it appears that he applied the same to the contemplation of nature (Costache 2021, pp. 139–68; Tzamalikos 2006, pp. 48–60). For example, he mentioned the importance of consistency in deploying an interdisciplinary method about any object of reflection, whether ethical, physical, or theological in nature (*Commentary on Genesis* [ed. Metzler (Werke, vol. 1.1)] 9.154.12–156.31). By “physical”, both he and the Platonic tradition to which he belonged referred to what more commonly is called natural philosophy, the ancient correspondent of the modern natural sciences. In short, his method is about advancement from the immediate to the ethical to the spiritual senses. The elements of Clement’s method, in turn, can only be pieced together from scattered references; he never discusses it openly. In short, Clement’s method works along the lines of description, interpretation, and vision, as the passage on Abraham, earlier mentioned, partially shows (Costache 2021, pp. 114–38).

What matters is that both authors followed similar threefold schemas. Significant differences between their approaches are patent, however, of which the most notable being Origen’s emphasis on contemplating the cosmos in the mirror of Scripture (Blowers 2012, pp. 153–54, 318–19). In this vein, Charlotte Köckert (2009, pp. 240–92, 258–59) proved that what undergirded Origen’s nature contemplation derived almost exclusively from his view of the Genesis narrative of Creation. Clement, too, considered the Scriptures a framework for the contemplation of nature. In his words, “according to the rule of truth pertaining to gnostic tradition, the discourse on nature—or rather the highest vision—begins with the exposition on cosmogony and then ascends to the theological perspective” (*Stromata* 4.1.3.2). Laura Rizzerio (1996, pp. 43–76) produced an exhaustive analysis of this passage. Noteworthy is the phrase “the exposition on cosmogony”, which refers to Genesis (Blowers 2012, pp. 37, 317). Thus, the Christian theological worldview entails contemplating the cosmos through the lens of Genesis. This authenticated lens, divinely inspired, facilitates a perception of things from above, from God’s vantage point, “the highest vision”. This is the province of the contemplative who is situated in God’s proximity, the saint. But what stands out at this juncture is that, while Origen interpreted the world by commenting on Genesis, for Clement the Book of Genesis is not the object of interpretation; it is a hermeneutical prerequisite, the framework for interpreting the universe.

Of great interest is that, before he undertook to assess reality in theological fashion, Clement devised a step-by-step approach that begins with the scientific analysis of nature—according to the available sciences—and continues with an interpretation that draws on the Church’s world, with its hymns, scriptures, and rhythms. This ecclesial contextualization corresponds to what I have brought to the fore above, in regard to musical imagery, and so I will not repeat it here. Nevertheless, it could be useful to briefly consider the scientific dimension of the method. For example, Clement refers to four branches of physics, or natural philosophy: science as research into what and how things are; the theoretical science of the species and categories, both general and particular; the science of relations between things and their connection to the whole, or the universe; and what we could call noetic science, which includes the invisible aspect of reality towards a fuller understanding (*Stromateis* 2.17.76.2). This effort to develop a method of natural contemplation places him among the pioneers of science in Late Antiquity (Costache 2021, pp. 129–30; Scott 1991, pp. 106–7).

I could not find a single passage where Clement says upfront that scientific enquiry and the theological interpretation complement each other, but his recurrent references to both denote an interdisciplinary cast of mind. The same can be inferred from his preferred Old Testament examples, Abraham and Moses (*Stromateis* 1.23.153.2–5; 4.6.40.3), whom he understood as both trained in the classical curricular disciplines and steeped in theological knowledge (Costache 2021, pp. 113, 117–18, 122–25; Rizzerio 1996, pp. 150–81). Especially his depiction of Abraham is relevant, as the patriarch, in Clement’s rewriting of the story, progressed from astronomy to theology—“becoming a sage and a God-lover instead of a naturalist”—without abandoning the scientific study of nature (*Stromateis* 5.1.8.5–6;

6.10.80.3). In short, Clement’s method of natural contemplation advances from grasping natural phenomena with scientific rigor to interpreting reality in ecclesial fashion to viewing the cosmos theologically, from the divine vantage point. Contemplation from the divine viewpoint is the province of the holy person (Costache 2021, pp. 128–35). While Origen appears to have been aware of Clement’s step-by-step approach to things, and definitely shared in his conviction that the contemplation of nature requires holiness (Crouzel 1985, pp. 139–40, 160), he was less interested in incorporating scientific information into his method (Costache 2021, pp. 157–60). What matters, at this stage, is that the early Christian methods of nature contemplation marked an important step forward towards an optimistic stance in regard to the world.

2.4. Christian Natural Philosophy

Clement’s more systematic approach to nature contemplation, as well as Theophilus of Antioch’s (d. ca 180) earlier attempt at engaging Genesis 1 in polemical conversation with ancient natural philosophy (Louth 2020, pp. 69–71; Louth 2009, p. 43), set the tone for later developments. Several fourth-century Christian theologians, among whom the most prominent are Basil of Caesarea (d. ca 379) and Gregory of Nyssa (d. ca 395), went beyond this contemplative integration of perspectives by venturing into the land of natural philosophy. Both worked towards what can be called a Christian cosmology, though their intentions might have been more complex than this. While this cosmology developed against the backdrop of Scriptural exegesis (both authors wrote commentaries on the Genesis narrative of Creation) and polemical stances (both had undertaken to prove the superiority of Christian cosmology to other representations of reality), the sense that they enjoyed researching the natural world as scientists is inescapable (Costache 2021, pp. 223–41, 292–97, 309–26; Karamanolis and Schwartz 2008; Louth 2020, pp. 72–79).

That this is so transpires, for example, through Basil’s sense that where Scripture remains silent, the reader should fill the gaps in the account of the universe’s order by drawing upon external knowledge, namely, the available sciences. In his words,

When he (namely, Moses) said, “In the beginning God made the heaven and the earth”, he passed over in silence many things, such as water, air, and fire, out of which (created beings) happen to be produced. All these (elements) which completed the cosmos obviously existed, beyond any doubt, but the story left them out so that our mind can exercise its skills by inferring the rest from little pointers. (*Homilies on the Hexaemeron* [ed. Giet (SC 26)] 2.3.14–19).

This passage brings to the fore Basil’s implicit conviction that the natural sciences have their role to play in our quest for understanding the universe. The reader of Genesis is supposed to draw on various sources of knowledge in order to reach a comprehensive view of the cosmos, especially when the Scriptures remain silent. In turn, Gregory applied a double interpretation to the same narrative, showing that the reader can discern a theological dimension—largely confined to the first verse—and then a human perspective that relies upon the sciences and organizes the items in logical sequence. His favorite illustration of the two dimensions was the diffusion of light, a natural phenomenon (*An Apology for the Hexaemeron* [ed. Drobner] 8–9, 64–74), which he articulated into what elsewhere I called Creation as a single event and as multiple events (Costache 2021, pp. 316–26). In short, theologically perceived, light and the universe are fully unified; when, however, they are gazed upon from a human perspective, they are a multitude of events and objects. The two perspectives complement each other in building a theory of everything, as it were, able to account for the whole and the parts.

Many early Christian thinkers showed similar interests in the cosmos and nature more broadly (see Lazaris 2016; Pelikan 1993; Wallace-Hadrill 1968), and so also did their Byzantine progeny (Costache 2015; Costache 2020; Lazaris 2020).

2.5. Transformations

While the short time frame under consideration here, from the first to the fifth century, is dwarfed by the *longue durée* of the past historical transitions Fletcher discusses, let alone Deep Time's aeons, I submit that the relevant developments can still be considered through a similar lens. Early and mediaeval Christians underwent successive transitions in regard to their view of the cosmos and, as we shall find out in the remaining part of this study, their own place within the world and experience of it. All this occurred under the pressure of internal and external factors, and at a swift pace. But speed should not be a problem for us. After all, we should expect transitions to occur at shorter and shorter intervals (Fletcher 2019, p. 178). And it appears that the main internal factor mentioned above—the quest for holiness, which amounts to a spiritual “spin” of human life and activity, to use another physical metaphor—proves to be a more effective catalyst of change than the economical, historical, social, and technological factors that caused earlier civilizational transitions. It is true, spiritual achievements are neither characteristic of large populations nor obvious on a grand scale; no wonder research in the area of environmental history does not pay attention to them (see Griffiths and Robin 1997; Jordan Heckscher 2013; Mauch and Robin 2014); they are not inconsequential either. It is to this matter that I now turn.

The positive appraisal of the cosmos discussed in the previous sections became increasingly dominant in the fourth century, after the Romans ceased persecuting the Church. This is the major contextual factor that facilitated the next shift—or perhaps merely made possible its unhindered manifestation. Specifically, building on the positive presuppositions discussed in the foregoing, Christians realized the significance of their presence in the world, their capacity and duty to interact with it creatively, even before the Roman change of policies.

To return for a moment to *Diognetus*, we find there the stunning assertion that “Christians are in the world what the soul is in the body” (6.1). This is to say that they infuse life into the world the way the soul keeps the body alive. Related to this, several lines later the anonymous writer daringly suggests that Christians contribute to the stability of the universe. Textually, “they preserve the cosmos” in existence (*ibid.*, 6.7). The claim is audacious—perhaps more than the usual definitions of anthropic cosmology, where the parameters of the universe are conditioned for (“the universe must have those properties which allow life to develop within it at some stage in its history”) and by (“observers are necessary to bring the universe into being”) humankind's existence (Barrow and Tipler 1986, pp. 15–22). Thus, despite being marginalized and persecuted, Christians are the agents of Christ the Logos, the *Pantokrator*, working alongside him for the wellbeing of the world. Said otherwise, metaphorically, in light of my earlier note, they are fishes, working together with the fish, Jesus Christ, ΙΧΘΥΣ, under the new zodiacal age of Pisces. *Diognetus* does not explain how Christians perform this cosmic service, but the fact that no explanation is given indicates a known fact, at least among the members of that community.

The clarification of how Christians might contribute to the stability of the universe comes, indirectly, from Origen, who reiterated this stance. He pointed out several times that, as William Rusch (2009, pp. 321–23) shows, believers' spiritual endeavors amount to an efficient prayer by which they invoke God's healing power over the Creation. The idea was not new. Already Justin Martyr (d. ca 165), again without providing an explanation, asserted that the prayers of Christians sustain the world in existence (*Second Apology* [eds. Minns and Parvis] 7.1). Echoes of this view reverberate throughout the early Christian tradition (Costache 2021, pp. 45–48), for example in Serapion of Thmuis (d. ca 362), Gregory the Theologian (d. ca 389), and John Climacus. Specifically, Serapion referred to the prayers of Egyptian monks as enabling the stability of the earthly ecosystem (*Letter to the Monks* [trans Herbel]); Climacus mentioned the “energy” of prayer as the “support of the world” (*Ladder of Divine Ascent* [ed. Patr. Graec. vol. 88] 28); while Gregory believed that his reconstituted community brought back to life the city of Constantinople, which was spiritually dead (*Concerning His Own Life* [ed. White (Camb. Med. Class. 6] 583–91). Against this backdrop, the assertion of *Diognetus* regarding Christians' efficient presence

presupposes that the virtuous life—especially its ascetic, contemplative, and prayerful dimensions—has an environmental and cosmic impact. It is the waves of virtue, or holy living, that render the presence of Christians into an effective factor, environmentally and cosmically.

The transformative and impactful dimension of the quest for holiness comes to the fore. This is one of the most important contributions of the early Christian tradition, so far little researched, and of immediate relevance to my topic.

The above and other authors were aware of the ontological and cosmological significance of living a holy life. It appears that what they had in mind was no common activity, whether under the guise of prayer for the world or some undertaking pertaining to environmental management. It is true that care for the natural environment—especially for animals, including wild and supposedly dangerous ones—is abundantly documented in Patristic sources (Costache 2016; Keselopoulos 2001; Schaefer 2009, pp. 149–64). Nevertheless, from Justin and the author of *Diognetus* to John Climacus and beyond, Patristic wisdom alludes to processes that unfold in the background of things visible—the quantum level of reality, if you will—a kind of mystical influence exercised by the presence of spiritually advanced people, akin to the workings of divine activity in the universe. For the Logos of God works in the infrastructure of reality, not at the surface. For instance, Clement talks about the Logos' active presence in terms of a fundamental song—*cantus firmus*—that permeates everywhere, establishing, shaping, and transforming the universe.⁴ Later Christian authors and Byzantine iconography⁵ depict holy persons in like manner, namely, making a positive dent in the fabric of reality, existentially, environmentally, and cosmically. Hagiographical accounts show the saints defying whatever we think we know of human nature and this world, revealing aspects of nature which most people ignore. Evidence of such experiences has been accumulating in history, causing wonder to confessedly agnostic thinkers of our age (Eire 2023). No wonder the same transformed people were able of surprising, incredible feats. For example, the early monastic writers mentioned wild animals behaving unexpectedly tamely around the saints (Chryssavgis 2003, pp. 85–87; Costache 2016, pp. 30–31, 34–36; Theokritoff 2009, pp. 93–154). Later, on a grander scale, Maximus the Confessor depicted the remaking of the universe in humankind's image and likeness, provided humankind remakes itself in the image and likeness of God (Costache 2015, pp. 381–85, 388–90). But one of the best illustrations of this experience undoubtedly remains Symeon the New Theologian's, who described a wholly transfigured universe, transformed in proportion to the existential or internal changes the saints underwent. As a result, his eschatological universe is diaphanous, embodied light (*The First Ethical Discourse* [ed. Darrouzès (SC 122)] 4–7). These witnesses point to one conclusion, that is, internal changes lead to accelerated transformations of the world, from the immediate natural environment to the cosmos at large. The prospect is astonishing. But to grasp the contours of the early Christian and mediaeval view of reality and of inhabiting the world is impossible without considering it.

While *Diognetus* does not connect holiness and the cosmic agency of Christians, at least not explicitly, later sources, as we have seen just above, make plain that significant changes occur when people walk on the path of holy life. These changes are internal or existential, the direct outcome of people's proximity to God (Foltz 2014, pp. 3–6, 11–12, 20, 135–36). They go from physiological to morphological to functional (Costache 2022b, pp. 66–73) and, relevant here, affect the matrix of reality, the universe itself. In the case of holy persons, the saints—to paraphrase Barrow and Tipler (1986, pp. 22–23)—the quantum signature of conscious life becomes already obvious, long before the far future state of the universe. The saints seem to be tapping into the atomic weak force—"its ability to transform fundamental particles into each other", as Lewis and Barnes (2019, p. 197) describe it—in order to (re)make the universe. And while these two (*ibid.*, p. 209) do not list the saints among the "other forces" at work in the background of cosmic reality, evidence points to their impactful presence. The saints are, by all intents and purposes, Fletcher's universe makers.

3. Conclusions

The early Christians and their mediaeval progeny experienced in a very short time frame a series of shifts of attitude with regard to representing the cosmos and their own place within it, whose causes are both internal and external. These changes of perception—from fearing the world to embracing it and on to desiring to know it—paved the way for a spiritual transition, in the sense Fletcher uses this term, but having at its core the human person’s existential transformation in the presence of God and without the aid of technology. For the spiritual life is free of technological aids (Maximus, *Ambigua* [ed. Constatas, vol. 1] 45.5). We have seen above that this change leaves physical and cosmic footprints. What all this amounts to is that Fletcher’s long time frame needed by a technological society to reach the threshold of the fourth transition can be achieved in a heartbeat, as it were; history can go to warp speed in circumstances related to the human person’s inner transformation.

Before I finish, however, I must ask one question: Were these changes, or transitions, perceived as such by the Patristic thinkers themselves? I would respond in the affirmative. To give two classical examples, Gregory the Theologian, for instance, remarked on three shifts in humankind’s history, intellectual and existential in nature, which he called “earthquakes”. These were transitioning from polytheism to monotheism, from monotheism to the Trinitarian faith, and from the current state of flux to the completion of all things at the end time (Oration [ed. Gallay. SC 250] 31.25; see [Baghos 2013](#)). This is to say that shifts in mentality lead to ontological changes. In the same vein, Maximus the Confessor mentioned two great phases of history, namely, the aeons that prepared the incarnation, for God to become a human being, and the aeons reserved for deification, for humankind to become divine (*Responses to Thalassius* [ed. Laga and Steel. (Corp. Christ. Ser. Graec. 7)] 22.4–65; [Wood 2022](#)). Furthermore, Maximus, in the footsteps of Clement and the author known as Dionysius the Areopagite, described the same process by way of a threefold schema that applied to both rational and irrational beings, all of which are called to future glory in the form of the third stage (Maximus, *Chapters on Love* [ed. Ceresa-Gastaldo (Verb. Sen. 3)] 3.25.1–12; see [Costache 2017](#)). In this light, behind the scenes of Fletcher’s external processes of technological advancement and land management hide deeper undercurrents of the human experience, which are equally impactful, though their outcomes might not be immediately obvious. Either way, Fletcher’s interdisciplinary concept of transitions provides structure for our grasp of Patristic cosmology, understood as ways of representing the cosmos and of inhabiting the world.

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Notes

- ¹ Typical for the Byzantine representation of reality through the lens of church architecture is Maximus the Confessor’s “symbolic contemplation” in *The Mystagogy* (ed. Boudignon [Corp. Christ. Ser. Graec. 69]), 2.210–57 (see on this, briefly, [Louth 2023](#), pp. 288–89).
- ² E.g., “the universe is a symphony of strings; and the Mind of God can be viewed as cosmic music vibrating through hyperspace” ([Kaku 2006](#), p. 356).
- ³ See Philo’s reference to “the lyre with seven strings, which is analogous to the chorus of the planets” (*On the Creation* [ed. Cohn, vol. 1] 126.3–4).
- ⁴ In Clement’s words, “this pure song, the support of the whole and the harmony of all, brought this universe to a harmonious measure by expanding from centres to boundaries and from extremities to things in the middle” (*Exhortation* 1.5.2).
- ⁵ See, for instance, the transfigured landscapes presented here: <https://www.betsyporter.com/landscape/> (accessed on 6 August 2023).

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