# UNIVERSITY OF BIRMINGHAM

## University of Birmingham Research at Birmingham

# Physics and metaphysics in an early Ottoman Madrasa

Todd, Richard

DOI:

10.1163/18778372-12340014

License:

Creative Commons: Attribution (CC BY)

Document Version

Publisher's PDF, also known as Version of record

Citation for published version (Harvard):

Todd, R 2022, 'Physics and metaphysics in an early Ottoman Madrasa: Dāwūd al-Qayṣarī on the nature of time', *Oriens*, vol. 50, no. 1-2, pp. 108–142. https://doi.org/10.1163/18778372-12340014

Link to publication on Research at Birmingham portal

**General rights** 

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- •Users may freely distribute the URL that is used to identify this publication.
- •Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- •User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- •Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Download date: 25. Apr. 2024





### Physics and Metaphysics in an Early Ottoman Madrasa: Dāwūd al-Qayṣarī on the Nature of Time

Richard Todd

Lecturer in Islamic Studies, Department of Theology and Religion,
University of Birmingham, Birmingham, UK
r.m.w.todd@bham.ac.uk

#### **Abstract**

Although overshadowed by his celebrated commentaries on Ibn 'Arabī and Ibn al-Fāriḍ, Dāwūd al-Qayṣarī's (d. 750/1351) treatise on the philosophy of time — the *Nihāyat al-bayān fī dirāyat al-zamān* (*The Utmost Elucidation Concerning Knowledge of Time*) — is a notable milestone in the history of Islamic conceptions of temporality. Composed around the start of Qayṣarī's tenure as head of the first Ottoman madrasa, the *Nihāyat al-bayān* rejects the Aristotelian definition of time as the number of motion in favor of Abū l-Barakāt al-Baghdādī's concept of *zamān* as the measure of being. Challenging, likewise, portrayals of time as a flux or succession of fleeting instants, Qayṣarī propounds instead an absolutist vision of time as an integral, objectively existent whole. Qayṣarī's reassessment of dominant medieval theories of temporality — including *kalām* atomism and the Neoplatonic distinction between time, perpetuity, and eternity — is thus shown to be a key early example of what was to become an abiding Ottoman interest in time and timekeeping.

#### Keywords

Dāwūd al-Qayṣarī – philosophy of time – Avicenna – Abū l-Barakāt al-Baghdādī – Fakhr al-Dīn al-Rāzī – Ibn ʿArabī

#### 1 Introduction

Debates regarding the nature of time are a notably recurrent feature of classical Islamic thought. Faced with a plethora of competing theories – some

rooted in Platonic or Aristotelian philosophy (with its concept of an eternal universe without temporal beginning or end), others in the creationist theology of the *mutakallimūn* – Muslim thinkers often grappled with the problem of how best to define time's essence. Is time simply the measure or "number" of motion, as Aristotle – whose *Physics* (iv, 10–16) forms the bedrock of both Avicenna's (d. 428/1037) and Averroes's (d. 594/1198) treatment of this topic – proposes, or motion itself, as the Platonists seem to suggest? Or is it rather the measure of the act of being as Abū l-Barakāt al-Baghdādī (d. 559/1164) contends? Then there is the issue of time's ontological status. Does time exist as a simultaneous whole or in fleeting, piecemeal fashion alone? Does time, for that matter, exist outside the mind or is it a purely imaginary construct as the Ikhwān al-Ṣafā' claim? Is there a first moment in time, as the early *mutakallimūn* argued, or is it without beginning or end as espoused by the Aristotelians? And how does the notion of time relate to the divine and angelic realms described in the scriptures?

A summary of these familiar aporias,¹ and the different theories put forward in response to them, forms the starting point of a four-part treatise, the *Nihāyat al-bayān fī dirāyat al-zamān (The Utmost Elucidation Concerning Knowledge of Time*), by the Sufi thinker and head of the first Ottoman madrasa, Dāwūd ibn Maḥmūd al-Qayṣarī (d. 750/1351).² Although the object of little scholarly attention hitherto,³ the ideas set forth in the *Nihāyat al-bayān* constitute, as we

<sup>1</sup> Avicenna's discussion of time in the Shifā' begins, likewise, with a review of the puzzles and conflicting theories surrounding time's nature. See Avicenna. The Physics of The Healing: A Parallel English-Arabic Text in Two Volumes, trans. by Jon McGinnis (Provo, Utah: Brigham Young University Press, 2009), pp. 219–28.

<sup>2</sup> On Qayşarī's life and works, see Mehmet Bayrakdar, La philosophie mystique chez Dawud de Kayseri (Ankara: Editions Ministère de la Culture, 1990), pp. 14–27; Mohammed Rustom, "Dāwūd Qayṣarī: Notes on his Life, Influence, and Reflections on the Muḥammadan Reality," Journal of the Muhyiddin Ibn 'Arabi Society 38 (2005): 51–57; Ali Hussain, "Dāwūd al-Qayṣarī," in E1³, ed. by Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas and Everett Rowson (retrieved January 11, 2022, via http://dx.doi.org/10.1163/1573-3912\_ei3\_COM\_25946); Caner Dagli, Ibn al-'Arabī and Islamic Intellectual Culture: From Mysticism to Philosophy (London & New York: Routledge, 2016), pp. 119–20; Ihsan Fazlıoğlu, "What Happened in Iznik? The Shaping of Ottoman Intellectual Life and Dāwūd Kaysari," Nazariyat: Journal for the History of Islamic Philosophy and Sciences 4.1 (2017): 13–22; Mukhtar H. Ali, The Horizons of Being: The Metaphysics of Ibn al-'Arabī in the Muqaddimat Al-Qayṣarī (Leiden [a.o.] Brill, 2020), pp. 4–8.

<sup>3</sup> Where scholarship in European languages is concerned, such attention has typically been restricted to the odd mention in passing. See, for example, Bayrakdar, *La philosophie mystique*, p. 27; and Fazlıoğlu, "What Happened in Iznik?," p. 37. In Persian, however, there is an engaging discussion of Qayṣarī's concept of time in Ṭūbá Kirmānī's introduction to her Persian translation of the *Nihāyat al-bayān*. See Qayṣarī, *Zamān az dū nigāh: tarjumah-i risālah-i Qayṣarī az zamān va ta'līqah-i mu'ammā-yi zamān / ta'līf-i Dāvud ibn Maḥmūd ibn* 

shall see, an interesting juncture in the history of Islamic conceptions of temporality. Proposing an absolutist vision of time as an integral whole, Qayṣarī challenges philosophical and theological conceptions that picture time as a flux of fleeting instants bounded by a non-existent past and future.

Famed primarily for his lengthy commentary on Ibn 'Arabī's (d. 638/1240)  $Fu\bar{s}u\bar{s}$  al-hikam, <sup>4</sup> Qayṣarī wrote chiefly in the tradition of post-classical Sufi metaphysics associated with Ibn 'Arabī and his successors, <sup>5</sup> notably al-Qūnawī (d. 673/1274), <sup>6</sup> al-Jandī (d. 700/1300), and 'Abd al-Razzāq al-Kāshānī (d. 730/1330), under whose tutelage Qayṣarī is known to have studied. <sup>7</sup> His works – judging, at any rate, by all available evidence – are relatively few in number: scarcely more than half a dozen titles in all. <sup>8</sup> These include, alongside his celebrated commentary on the  $Fu\bar{s}u\bar{s}$ , two substantial and by all accounts widely-read commentaries on Sufi poems by Ibn al-Fāriḍ (a favorite with early members of Ibn 'Arabī's school), <sup>9</sup> and two original epistles of note: the  $Nih\bar{a}yat$ 

*Muḥammad Qayṣarī; tarjumah-i Ṭūbá Kirmānī*, trans. by Ṭūbá Kirmānī (Tehran: Dānishgāh-i Tihrān, 2000).

<sup>4</sup> See Qayṣarī, Sharḥ-i Fuṣūṣ al-ḥikam, ed. by Jalāl al-Dīn Āshtīyānī (Tehran: Sharikat-i intishārāt-i 'ilmī va farhangī, 1996). Historically more influential, in fact, than Qayṣarī's actual commentary on the text of the Fuṣūṣ is the long introduction (muqaddima) preceding it, in which he sets forth his metaphysical system. Often treated as an independent work, this introduction circulated widely under the title Maṭla' al-khuṣūṣ. See Ḥājjī Khalīfa, Kashf al-ẓunūn 'an asāmi l-kutub wa-l-funūn, ed. by Muḥammad Yāltaqāyā and Rif'at al-Kilīsī (Istanbul: Wikālat al-ma'ārif, 1941–43), vol. 2, p. 1720. For a comprehensive study of Qayṣarī's introduction, see Ali, The Horizons of Being.

<sup>5</sup> For a survey of the key metaphysical theories associated with Ibn 'Arabī and the major representatives of his school (Qayṣarī included), see Mukhtar H. Ali, *Philosophical Sufism: an Introduction to the School of Ibn al-'Arabi* (London & New York: Routledge, 2021).

<sup>6</sup> For a detailed study of Qayṣarī's elaborations on one of Qūnawī's signature metaphysical theories, see William Chittick, "The Five Divine Presences: From al-Qunawi to al-Qayseri," *Muslim World* 72 (1982): 107–28. See also, Özgür Koca, *Islam, Causality, and Freedom: From the Medieval to the Modern Era* (New York: Cambridge University Press, 2020), pp. 35–38.

<sup>7</sup> See Bayrakdar, *La philosophie mystique*, p. 14; Hussain, "Dāwūd al-Qayṣarī"; and Fazlıoğlu, "What Happened in Iznik?," pp. 16–18. For a brief overview of Qayṣarī's place in the development of Ibn 'Arabī's school, see William Chittick, "The School of Ibn 'Arabī," in *History of Islamic Philosophy*, ed. by Seyyed Hossein Nasr and Oliver Leaman (London & New York: Routledge, 2001), p. 518.

<sup>8</sup> See Ḥājjī Khalīfa, *Kashf al-zunūn*, vol. 2, p. 1720. See also Carl Brockelmann, *Geschichte der arabischen Litteratur* (Supplementband II) (Leiden [a.o.]: Brill, 1938), p. 323; Mehmet Bayrakdar, "Dâvûd-i Kayseri," in *Türkiye Diyânet Vakfı Islâm Ansiklopedisi* (Istanbul: Türkiye Diyânet Vakfı, 1995), vol. 1x, pp. 33–35; Fazlıoğlu, "What Happened in Iznik?," pp. 36–37; and Ali, *The Horizons of Being*, pp. 4–5.

<sup>9</sup> For a discussion of Qayṣarī's commentary on Ibn al-Fāriḍ's wine song (khamriyya), see Th. Emil Homerin, *The Wine of Love and Life: ibn al-Fāriḍ's al-Khamrīyah and al-Qayṣarī's Quest for Meaning* (Chicago: Middle East Documentation Center, 2005).

*al-bayān* on the philosophy of time and a treatise entitled *Taḥqīq mā' al-ḥayāt* wa-kashf astār al-zulumāt on whether al-Khiḍr is a prophet or a saint.<sup>10</sup>

Although he is chiefly associated in Ottoman historical sources with the directorship of the madrasa that the Ottoman sultan Orhan Gazi founded in Iznik in 731/1331 (or according to some sources 735/1335),<sup>11</sup> Qayṣarī, who was of Persian lineage,<sup>12</sup> spent an important part of his earlier career in Tabriz under the patronage of the Ilkhānid vizier Ghiyāth al-Dīn Muḥammad (d. 736/1336),<sup>13</sup> the figure to whom he dedicated his commentary on the Fuṣūṣ.<sup>14</sup> By the time, however, that he came to write the Nihāyat al-bayān, Qayṣarī, as Mehmet Bayrakdar has argued,<sup>15</sup> had evidently switched patrons from Ghiyāth al-Dīn to Orhan – prompted, perhaps, by the increasing political instability of the Ilkhānate<sup>16</sup> – since the alqāb or honorific titles (viz. al-mawlā l-muʿazzam al-ṣāḥib al-aʿzam mālik azimmat mawālī l-ʿālam) of the unnamed ruler to whom Qayṣarī dedicates the Nihāyat al-bayān<sup>17</sup> are clearly variations on the signature alqāb of the Ottoman sultan, as preserved, for example, in the vakfiye or charter of a Sufi lodge (zāwiya) that Orhan endowed in Iznik in 761/1360<sup>18</sup> as well as in the text of a treatise ascribed (with a good measure

<sup>10</sup> See Qayşarī, *Taḥqīq māʾ al-ḥayāt wa-kashf astār al-zulumāt* (Princeton University Library, Princeton, MS Garrett 464H).

<sup>11</sup> See Halil Inalcik, *The Ottoman Empire: The Classical Age 1300–1600* (London: Phoenix Press, 2000), p. 166; and Brockelmann, *GAL*, *Suppl. II*, p. 323. See also Bayrakdar, "Dâvûd-i Kayseri," vol. IX, pp. 33–34.

<sup>12</sup> At the start of his works, Qayṣarī typically identifies himself as *al-Rūmī* (the Anatolian) *al-Qayṣarī mawlidan* (from Kayseri by birth) *al-Sāwa'ī maḥtidan* (from Sāwa [in Iran] by lineage). See, for example, *Sharḥ-i Fuṣūṣ al-ḥikam*, p. 4, and *Nihāyat al-bayān fī dirāyat al-zamān* (Süleymaniye Library, Istanbul, MS Hacı Mahmud Efendi 1511), fol. 1r.

<sup>13</sup> See Fazhoğlu, "What Happened in Iznik?," pp. 18, 36. On Ghiyāth al-Dīn, see Peter Jackson and Charles Melville, "Gīāṭ al-Dīn," in *Encyclopædia Iranica*, ed. by Ehsan Yarshater, vol. x. (London and New York: Routledge, 2001), pp. 598–9.

<sup>14</sup> See Qayşarī, Sharḥ-i Fuṣūṣ al-ḥikam, pp. 6-7.

<sup>15</sup> See Mehmet Bayrakdar, *Dâvûd el-Kayserî* (Istanbul: Kurtuba Kitap, 2009), p. 21.

On the demise of the Ilkhānate, see Jackson and Melville, "Gīāṭ al-Dīn"; and Charles Melville, "The End of the Ilkhanate and After: Observations on the Collapse of the Mongol World Empire," in *The Mongols' Middle East: Continuity and Transformation in Ilkhanid Iran*, ed. by Bruno De Nicola and Charles Melville (Leiden [a.o.]: Brill, 2016), pp. 309–36.

<sup>17</sup> See Qayşarī, *Nihāyat al-bayān fī dirāyat al-zamān* (Kitābkhānā-yi majlis-i shūrā-yi islāmī, Tehran, MS Majlis-i shūrā-yi islāmī, no. 3321), fol. 342.

<sup>18</sup> For the text of Orhan's *vakfiye*, see Ismail Uzunçarşılı, "Orhan Gazi'nin vefat eden oğlu Süleyman Paşa için tertip ettirdiği vakfiyenin aslı," *Belleten 27*, no. 107 (1963): 438; and Heath Lowry, *The Nature of the Early Ottoman State* (Albany: State University of New York Press, 2003), p. 84. See also Appendix.

of plausibility)<sup>19</sup> to Qayṣarī, entitled *al-Itḥāf al-Sulaymānī fī l-ʿahd al-Ūrkhānī*, in which the author names his patrons as Orhan and his son Süleyman Paṣa.<sup>20</sup>

As for when exactly the *Nihāyat al-bayān* was written,<sup>21</sup> the extant manuscripts suggest that Qayṣarī may have produced two marginally different recensions within a few weeks or even a few days of one another. At any rate, the colophons of Ms Tehran Majlis-i Shūrā 3321 (copied in 1081/1670–1 from Qayṣarī's autograph) and Ms Istanbul Hacı Mahmud Efendi 1511 (in which the text of the *Nihāyat al-bayān* appears slightly more polished than in the Tehran manuscript) state that the treatise was completed in Dhū l-Ḥijja 735 (August 1335) and Muḥarram 736 (September 1335) respectively.<sup>22</sup> All things considered, therefore, such documentary evidence allows us to place, with a high degree of confidence, the composition of the *Nihāyat al-bayān* around the start of Qayṣarī's tenure as the head of the Iznik madrasa, a position he held until his death in 750/1351. This may well account for its scholastic style, with its succession of points and counterpoints aimed at assessing the validity of diverse philosophical and theological opinions regarding a specific *masʾala* or disputed question.

As recent studies have demonstrated, the topics of time and timekeeping held a special place in Ottoman thought and culture.<sup>23</sup> Admittedly, scholarship devoted to this subject thus far has tended to deal primarily with the Ottomans' interest in calendars and their adoption of modern methods of timekeeping,<sup>24</sup>

Effectively intended to demonstrate its author's expertise across a wide range of traditional scholastic disciplines – from jurisprudence and theology to physics and prosody – the *Itḥāf* contains passages of critical engagement with Avicenna that are similar in style and approach to those in the *Nihāyat al-bayān*. Likewise, the distinctive locutions used by Qayṣarī in his dedication to his patron in the *Nihāyat al-bayān* closely resemble those used in the dedication of the *Itḥāf*. See the Arabic text of the *Itḥāf* in Fazlıoğlu, "What Happened in Iznik?" pp. 43, 55–58. See also Appendix.

<sup>20</sup> See the Arabic text of the *Itḥāf* in Fazlıoğlu, "What Happened in Iznik?," p. 43.

We know that the *Nihāyat al-bayān* is one of Qayṣarī's later works as it contains references to the *Fuṣūṣ* commentary. See Qayṣarī, *Nihāyat al-bayān fī dirāyat al-zamān*, in *Rasā'il-i Qayṣarī bā ḥavāshī-i Muḥammad Rizā Qumshāhī, ed. by Jalāl al-Dīn Āshtīyānī* (Mashhad: Mu'assasah-i chāp va intishārāt va girāfīk-i dānishgāh-i firdawsī, 1974), pp. 123, 130.

<sup>22</sup> See MS Tehran, Majlis-i shūrā-yi islāmī, no. 3321, fol. 342; and MS Istanbul, Hacı Mahmud Efendi 1511, fol. 6v.

<sup>23</sup> See, most notably, François Georgeon and Frédéric Hitzel (eds.), *Les Ottomans et le temps* (Leiden [a.o.]: Brill, 2012).

See Frédéric Hitzel, "De la clepsydre à l'horloge. L'art de mesurer le temps dans l'Empire ottoman," in *Les Ottomans et le temps*, pp. 13–37; and Klaus Kreiser, "Les tours d'horloge ottomans: inventaire préliminaire et remarques générales," in *Les Ottomans et le temps*, pp. 61–74. See also Daniel Stoltz, "Positioning the Watch Hand: 'ulama' and the Practice of Mechanical Timekeeping in Cairo, 1737–1874," *International Journal of Middle East Studies* 47.3 (2015): 489–510.

whereas the philosophical treatment of time has received minimal attention. Both the existence, however, and provenance of the *Nihāyat al-bayān* suggest that philosophical discussions, too, had a part to play in the development of official Ottoman interest in chronology.

#### 2 Qayṣarī's Critique of the Aristotelian and Avicennan Definitions of Time

Qayṣarī's treatise is motivated primarily by dissatisfaction with the theories of time proposed by Avicenna and his later commentator Naṣīr al-Dīn al-Ṭūsī (d. 673/1274). That said, it should be noted that the *Nihāyat al-bayān* is by no means anti-philosophical per se. In undertaking his critique of Avicenna's ideas, our author draws chiefly, as we shall see, upon objections formulated, not by Avicenna's opponents among the *mutakallimūn*, but by the philosopher Abū l-Barakāt al-Baghdādī. Since the Avicennan theories in question are based largely on Aristotle's treatment of time in the *Physics*, <sup>25</sup> Qayṣarī's critique is also, like that of Abū l-Barakāt, <sup>26</sup> implicitly an expression of dissatisfaction with the basic Aristotelian concept of time. When reconstructing Qayṣarī's argument it seems appropriate, therefore, to begin with his paraphrasing (albeit somewhat loose in places) and criticism of Aristotle.

Aristotle and those who follow him, so Qayṣarī reminds us, conceive of time  $(zam\bar{a}n)$ , not as a substance (jawhar) or entity in its own right, but as an accident ('arad), namely the magnitude  $(miqd\bar{a}r)$  of the motion of the diurnal sphere  $(harakat\ mu'addil\ al-nah\bar{a}r).^{27}$  Made up as it is of equal or comparable parts, time must therefore be a quantity (kamm); and since each part of it is connected to the next, without break or separation, the quantity in question must be of the continuous (muttaṣil) kind and hence different as such from a discrete quantity  $(kamm\ munfaṣil)$  like arithmetical number  $('adad).^{28}$  Now any quantity, so Qayṣarī's summary continues, presupposes some matter

On the impact of Aristotelian physics on medieval Arabic thought, see Paul Lettinck, Aristotle's Physics and Its Reception in the Arabic World, with an Edition of the Unpublished Parts of Ibn Bājja's Commentary of the Physics (Leiden [a.o.]: Brill, 1994).

See Abū l-Barakāt al-Baghdādī, *Kitāb al-Mu'tabar fī l-ḥikma*, ed. by Muḥammad 'Uthmān (Cairo: Maktabat al-thaqāfa al-dīniyya, 2015), vol. 2, pp. 298–301. See also, Shlomo Pines, *Nouvelles Etudes sur* Awḥad al-zamān *Abū-l-Barakāt al-Baghdādī* (Paris: Durlacher, 1955); and id., "Abu'l-Barakāt," in *EI*<sup>2</sup>, ed. by Peri Bearman, Thierry Bianquis, Emeri van Donzel, Clifford Bosworth and Wolfhart Heinrichs (retrieved January 11, 2022, via http://dx.doi.org/10.1163/1573-3912\_islam\_SIM\_0167).

<sup>27</sup> Qayşarī, *Nihāyat al-bayān*, p. 112. Cf. Aristotle, *Physics* IV. 223<sup>b</sup> 21.

<sup>28</sup> Qayṣarī, Nihāyat al-bayān, p. 113.

(*mādda*) which it serves to measure. In the case of time, this matter cannot simply be the distance covered by a moving body nor can it be the speed or slowness with which a body moves, as two bodies that differ in terms of their distance or speed may well be alike in terms of their temporal duration. Time, for the Aristotelians, is therefore the measure of motion envisaged solely in respect of its anteriority and posteriority, not its distance or speed.<sup>29</sup> Finally, although a continuous magnitude, time (unlike space) does not exist as a simultaneous whole lest past, present, and future coincide.<sup>30</sup>

Our author, it should be noted, does not reject this definition outright. Qaysarī agrees with Aristotle and the Peripatetic falāsifa generally in regarding time as an accident ('arad')31 and as a continuous magnitude capable of indefinite division.<sup>32</sup> He differs from them, however, on two fundamental counts. Firstly, like the anti-Avicennan philosopher Abū l-Barakāt al-Baghdādī<sup>33</sup> and the celebrated Ash'arī theologian Fakhr al-Dīn al-Rāzī (d. 606/1209),34 he challenges the idea that temporal duration is a function of motion alone; and secondly, adopting an absolutist view of time, he refuses to accept the successive view advocated by Aristotle and Avicenna. In this latter respect, Qayşarī focuses on the premise underpinning Aristotle's successive conception of time, namely that past, present, and future would coincide if time were a single continuous "now." It is true, Qaysarī concedes, that individual events cannot all supervene at the same time, but this of itself does not mean that time exists only as a succession of transitory instants; after all, past, present, and future are merely relative concepts, meaningful solely from the limited perspective of the human observer, and not actually intrinsic as such to time's objective reality.<sup>35</sup>

Qayṣarī, Nihāyat al-bayān, p. 113. Cf. Aristotle, Physics IV. 219<sup>b</sup> 1–2. See also Ursula Coope, Time for Aristotle: Physics IV. 10–14 (Oxford: Oxford University Press, 2005), p. 85. The idea that time is distinct from distance and speed is central to Avicenna's argument for establishing time's existence. See Peter Adamson, "The Existence of Time in Fakhr al-Dīn al-Rāzī's Maṭālib al-ʿāliya," in The Arabic, Hebrew and Latin Reception of Avicenna's Physics and Cosmology, ed. by Dag Nikolaus Hasse and Amos Bertolacci (Berlin: De Gruyter, 2018), pp. 79–85.

<sup>30</sup> Qayşarī, Nihāyat al-bayān, p. 113.

<sup>31</sup> Qayşarī, Nihāyat al-bayān, p. 121.

<sup>32</sup> Qayṣarī, Nihāyat al-bayān, pp. 122, 125.

<sup>33</sup> See infra, pp. 15–19.

For Fakhr al-Dīn al-Rāzī's critique of the concept of time as a function of motion see al-Rāzī, al-Maṭālib al-ʿāliya min al-ʿilm al-ilāhī, ed. by Aḥmad Ḥijāzī al-Saqqā (Beirut: Dār al-kitāb al-ʿarabī, 1987), pp. 52–54, 58, 63. See also Peter Adamson and Andreas Lammer, "Fakhr al-Dīn al-Rāzī's Platonist Account of the Essence of Time," in *Philosophical Theology in Islam: Later Ashʿarism East and West*, ed. by Ayman Shihadeh and Jan Thiele (Leiden [a.o.]: Brill, 2020), pp. 95, 100, 104, 107–8.

<sup>35</sup> Qayṣarī, *Nihāyat al-bayān*, p. 114.

Qayṣarī's absolutist theory appears to contain echoes – whether conscious or otherwise – of late antique antecedents, most notably the concept of time attributed to the late Neoplatonist, Damascius. Although the latter's theories have come down to us solely through the intermediary of his student, Simplicius,<sup>36</sup> it seems clear that Damascius was especially dissatisfied with the idea – inherent, as he saw it, in the successive view espoused by the Aristotelians – that time, quite unlike space, exists in a transitory fashion alone, as evanescent parts in a non-existent whole.<sup>37</sup> Space, in other words, clearly exists as a totality, not just a succession of fleeting points. So why should the same not be true of time? It seemed absurd to suggest that only a given part of time may be said to exist, whereas the whole does not. Against this view, Damascius propounded the theory that just as there is a total place so is there a total time, i.e., time as a whole existing in abstraction of our piecemeal perception thereof.<sup>38</sup>

To be sure, Aristotle himself, though opposed to the absolutist view, seems troubled by the logical repercussions of the successive theory, which apparently reduce time to nothing more than a flux of fleeting instants bounded by a non-existent past and future. Time, so the Stagirite observed, hardly seems to exist at all: the past no longer exists, and the future has not yet come into being. Only the fleeting "now" may be said to be, and even that is questionable.<sup>39</sup>

For Qayṣarī, this perceived evanescence has been brought to the fore in the Arabic Aristotelianism of Avicenna and his followers, becoming central

space and time in medieval and early modern philosophy, see Geoffrey Gorham, "The Twin-Brother of Space': Spatial Analogy in the Emergence of Absolute Time," Intellectual

History Review 22.1 (2012): 23-39.

<sup>36</sup> On Simplicius see Samuel Sambursky and Shlomo Pines, The Concept of Time in Late Neoplatonism (Jerusalem: Israel Academy of Sciences and Humanities, 1971), pp. 18–21.

Here, however, it is worth noting that it is certainly possible to challenge such an interpretation of the Aristotelian (and for that matter Avicennan) view of time's existence. Andreas Lammer, for example, has argued that, insofar as it is conceived of as the measure of motion, time's existence for Avicenna and the Aristotelians is therefore tied to that of a concrete reality, namely the moving object. See Andreas Lammer, *The Elements of Avicenna's Physics: Greek Sources and Arabic Innovations* (Berlin: De Gruyter, 2018), p. 519.
 On Damascius and his concept of a total time, see Sambursky and Pines, *The Concept of Time in Late Neoplatonism*, pp. 64–94. See also Carlos Steel, "The Neoplatonic Doctrine of Time and Eternity and Its Influence on Medieval Philosophy," in *The Medieval Concept of Time: the Scholastic Debate and Its Reception in Early Modern Philosophy*, ed. by Pasquale Porro (Leiden: Brill, 2001), p. 13. For a discussion of the perceived relationship between

See Michael Inwood, "Aristotle on the Reality of Time," in *Aristotle's Physics: A Collection of Essays*, ed. by Lindsay Judson (Oxford: Clarendon Press, 1991), pp. 151–78. See also Coope, *Time for Aristotle*, pp. 18–19.

to their concept of time<sup>40</sup> – a development our author feels especially bound to challenge. On this score, he focuses on two key passages in the  $Kit\bar{a}b$  al- $Ish\bar{a}r\bar{a}t$  wa-l- $tanb\bar{b}h\bar{a}t$  in which Avicenna (to whom Qayṣarī refers nonetheless by the honorific title of al-shaykh al-ra' $\bar{i}s$ ) elaborates upon the Aristotelian concept of time as the quantity of motion "not in respect of distance but in respect of anteriority and posteriority." Since the prior and posterior of temporal progression can never co-exist – a premise, as we have seen, fundamental to the dynamic view of time – time's existence, according to Qayṣarī's reading of these passages, consists in nothing more than a ceaseless flux of "before" and "after." Qayṣarī quotes Avicenna's treatment of this point in extenso, and in view of their importance it is worth revisiting in detail the relevant passages from the  $Ish\bar{a}r\bar{a}t$  (introduced by Qayṣarī's preamble):

In the *Ishārāt* the *shaykh al-ra'īs* has alluded to time's existence (wujūd *al-zamān*) in [two passages]. In the first he says: "In relation to the event which comes into being after not having existed, there is thus a before in which it did not exist. Now [the before in question] is not, therefore, like the anteriority of the number one over two, as this [logical] priority admits of that which is before [namely, one] and that which is after [namely, two] coexisting. On the contrary, [temporal] anteriority is that of a before which cannot coexist with an after. You could thus [conceive of the event which comes into being as the coming into being of a posteriority after an anteriority that no longer exists. This, however, is not to equate such [evanescent] anteriority with non-existence per se since non-existence can equally come afterwards too. Nor is it the same as the efficient cause, since this can exist before, simultaneously, or after. It is therefore something else – something in which renewal (tajaddud) and extinction (taṣarrum) occur continuously ('alā l-ittiṣāl). [Given what we have already said about the continuous nature of bodies and motion] you will understand that a continuity such as this, whose measure matches

<sup>40</sup> For a detailed analysis of Avicenna's conception of time, see Lammer, *The Elements of Avicenna's Physics*, pp. 429–524.

Qayṣarī is not alone in interpreting Avicenna's conception of time's reality as that of a constant flux. As Lammer has pointed out, modern scholars too (notably McGinnis) have tended to impute to Avicenna the idea that time is produced through the "flowing now." Lammer, by contrast, as we have seen, argues that time's existence, for Avicenna, is tied to that of the moving object (to be precise, the motion of the outermost heavenly sphere) such that, as Lammer puts it, "there is, then, no need to take recourse to the idea of the flowing now." See Lammer, *The Elements of Avicenna's Physics*, pp. 516–24.

that of motion, cannot be composed of indivisible parts."<sup>42</sup> Then, confirming time's essence, he says in a pointer which follows these remarks: "Because renewal is not possible except through a change of state – and a change of state can occur only in that which has the capacity to change, namely a substrate – it follows that this continuum is inevitably linked to motion and the mobile, by which I mean change and that which changes, especially of the continuous, uninterrupted kind, namely circular motion. This continuum, moreover, is measurable (<code>yaḥtamil al-taqdīr</code>), as one before may be further away and another may be nearer. Hence it is a quantity that measures change. <sup>43</sup> This then is time. It is the quantity of motion, not in respect of distance, but in respect of a priority and posteriority which never coincide."<sup>44</sup>

What Qayṣarī finds especially troublesome about these passages is the inherent contradiction, as he sees it, between the Avicennan notions of time as a series of "renewals" ( $tajaddud\bar{a}t$ ) and "extinctions" ( $taṣarrum\bar{a}t$ ) on the one hand<sup>45</sup> and time as an unbroken continuum on the other. In particular, he takes issue with Avicenna's use of the phrase ' $al\bar{a}$  l- $ittiṣ\bar{a}l$  or "continuously." A series of fleeting renewals and extinctions, so Qayṣarī argues, is not an actual continuum in the proper sense, indefinitely divisible as such, but rather a  $ta'\bar{a}qub$  or succession of transient instants. <sup>46</sup> While purporting, therefore, to subscribe to the Aristotelian concept of time as a continuous quantity, consistent as such with the continuous nature of circular motion, what Avicenna is really proposing, according to Qayṣarī, is a form of temporal atomism. Qayṣarī writes:

To speak of a succession of renewals and evanescences amounts to saying that time  $(zam\bar{a}n)$  is made up of consecutive instants each following the other, which necessarily presupposes the existence of indivisible

<sup>42</sup> For a discussion of this passage from the *Ishārāt*, see Lammer, *The Elements of Avicenna's Physics*, pp. 489–91.

<sup>43</sup> Cf. Aristotle's definition of time in *Physics* IV. 11; 219<sup>b</sup> 1–2: "Time is a number of change with respect to before and after."

<sup>44</sup> Qayşarī, *Nihāyat al-bayān*, p. 115; and Ibn Sīnā, *Kitāb al-Ishārāt wa-l-tanbīhāt*, ed. by Sulaymān Dunyā (Cairo: Dār al-ma'ārif, 1958), vol. 3, pp. 499–506.

On the key role played by the terms *taṣarrum* (extinction/elapsing) and *tajaddud* (renewal) in Avicenna's concept of time as (to quote Lammer) a "constantly shifting" reality whose parts are "just as motion itself non-integral and unstable," see Lammer, *The Elements of Avicenna's Physics*, p. 484.

<sup>46</sup> Qayṣarī, *Nihāyat al-bayān*, pp. 115–6. There is possibly an allusion here to Fakhr al-Dīn al-Rāzī's mature conception of time as a discrete quantity consisting of successive instants. See al-Rāzī, *Matālib*, pp. 69, 72.

parts (al-juz'  $alladh\bar{\iota}$   $l\bar{a}$  yatajazza'). This is because each of these renewals must occur perforce in a single moment ( $\bar{a}n$ ) of time, since they are each an originated event ( $h\bar{a}dith$ ) preceded by time.<sup>47</sup>

Given what we know of Avicenna's insistence on the idea that the continuum of time is indefinitely divisible (like that of spatial distance to which it is linked via motion), the accusation of implicit atomism is, at first sight, surprising. Indeed, as Andreas Lammer has observed, Avicenna repeatedly asserts that, insofar as it is conceived of as an indivisible division of time, the now has no objective existence outside the mind.<sup>48</sup> Instead, it is merely mapped onto time's indefinitely divisible continuum in the same way that a hypothetical point is mapped onto the continuum of space. In both cases, for Avicenna, it is the continuous magnitude that exists objectively, not its hypothetical divisions.<sup>49</sup>

Yet it is also true – again as Lammer has shown – that Avicenna often portrays time as a reality which, though required in order to account for the "beforeness" and "afterness" of change or motion,<sup>50</sup> is nonetheless in a constant state of coming-to-be and passing away<sup>51</sup>; and as such, its parts, which can never co-exist, are each as transitory as those of motion, to which it is tied.<sup>52</sup>

For Qayṣarī, then, the two recurrent images in Avicenna's account - viz. time as an objectively real continuum on the one hand and as a succession of renewals on the other - are mutually exclusive. Rather than existing objectively, albeit with a "weak" form of existence as Avicenna admits,<sup>53</sup> Avicenna's temporal continuum cannot possibly exist as such, on Qayṣarī's view, so long as it is conceived of as *ghayr qārr* or non-integral.<sup>54</sup> Having dismissed it on these grounds, what remains in Avicenna's portrayal of time, for Qayṣarī, is the succession of extinctions and renewals reminiscent of temporal atomism.

Although Qayṣarī refrains, in the *Nihāyat al-bayān*, from referring explicitly to the *mutakallimūn* (echoing thereby the general tendency of later representatives of Ibn 'Arabī's school to engage with the *falāsifa* but marginalize the

<sup>47</sup> Qayşarī, Nihāyat al-bayān, pp. 115-6.

<sup>48</sup> See Lammer, The Elements of Avicenna's Physics, p. 519.

<sup>49</sup> See Lammer, The Elements of Avicenna's Physics, pp. 520-3.

<sup>50</sup> See Lammer, The Elements of Avicenna's Physics, p. 488.

See Lammer, The Elements of Avicenna's Physics, pp. 439-40, 481, 484, 511.

<sup>52</sup> See Lammer, The Elements of Avicenna's Physics, pp. 484, 511.

<sup>53</sup> See Ibn Sīnā, *Avicenna. The Physics of* The Healing, p. 249. See also Lammer, *The Elements of Avicenna's Physics*, p. 524.

As will become clearer later on, Qayṣarī takes the view that the concept of time as a continuum (a concept he seeks to uphold) can be preserved only by divorcing it from motion and conceiving of it instead as *qārr al-dhāt* or essentially integral/static.

views of the theologians)<sup>55</sup> there are certainly instances, such as the remarks quoted above, where it seems possible to discern tacit references to the *kalām* treatment of time. Having invoked the notion of temporal atomism – a concept inevitably associated in Islam with Mu'tazilite and Ash'arite theology<sup>56</sup> - Qaysarī then, in effect at any rate, indicates a key respect in which Avicenna's implicit atomism (as Qaysarī construes it) differs from the explicit brand of the *mutakallimūn*. In the Avicennan succession of temporal renewals, so Qaysarī observes, there can be no logical justification for asserting that a particular renewal will occur in a given instant as opposed to any other. "To assert," says Qaysarī, "that a given event will not occur in a particular instant while another will, can be no more than an arbitrary preference in the absence of any compelling reason otherwise."57 In other words, unlike the atomistic occasionalism of the *mutakallimūn* – which is predicated precisely upon a divine agency recreating the world with each instant and thus producing the impression of temporal and ontological continuity $^{58}$  – the implicit atomism of Avicenna simply assumes that the series of renewals will follow on from each other in an apparently continuous and natural fashion, without sudden breaks or changes of state.

A sympathetic attitude towards philosophy is – as Rosenthal has pointed out – often evident in the writings of Ibn 'Arabī. See Franz Rosenthal, "Ibn 'Arabī between Philosophy and Mysticism: Ṣūfism and Philosophy Are Neighbours and Visit Each Other," *Oriens* 31 (1988): 1–35. Though Ibn 'Arabī, admittedly, engages with *kalām* to a far greater extent than tends to be the case with subsequent members of his school, it is usually for the purpose of criticizing the Ash'arites. The tendency to see *falsafa* as intellectually superior to *kalām* is even more pronounced in the works of Ibn 'Arabī's disciple Qūnawī, who speaks, for example, of the possibility of achieving harmony between the fruits of Sufi intuition and philosophical reasoning while confining his engagement with *kalām* to no more than the odd dismissive remark. See Richard Todd, *The Sufi Doctrine of Man: Ṣadr al-Dīn al-Qūnawī's Metaphysical Anthropology* (Leiden [a.o.]: Brill, 2014), pp. 36, 53.

On kalām atomism, see Gerhard Böwering, "The Concept of Time in Islam," Proceedings of the American Philosophical Society Held at Philadelphia for Promoting Useful Knowledge 141.1 (1997): 59–60. See also Duncan B. MacDonald, "Continuous Re-Creation and Atomic Time in Muslim Scholastic Theology," Isis 9 (1927): 326–44; Shlomo Pines, Beiträge zur islamischen Atomenlehre (Gräfenhainichen: Heine, 1936); Josef van Ess, 60 Years After: Shlomo Pines's Beiträge and Half a Century of Research on Atomism and Islamic Theology (Jerusalem: Israel Academy of Sciences and Humanities, 2002); Ahmad Hasnaoui, "Certain Notions of Time in Arab-Muslim Philosophy," in Time and the Philosophies (n.p.: UNESCO Press, 1977), pp. 49–79; Jon McGinnis, "The Topology of Time: an Analysis of Medieval Islamic Accounts of Discrete and Continuous Time," The Modern Schoolman 81 (2003): 5–25; and Alnoor Dhanani, "Atomism," in EI³ (retrieved January 11, 2022, via http://dx.doi.org/10.1163/1573-3912\_ei3\_COM\_24249).

<sup>57</sup> Qayṣarī, Nihāyat al-bayān, p. 116.

<sup>58</sup> See Böwering, "The Concept of Time in Islam," pp. 59–60.

But that is not all. If Avicenna's succession of temporal renewals is hard to square with the concept of a continuum then it must, by the same token, be equally hard to reconcile with the continuous nature of motion,<sup>59</sup> of which - according to the Peripatetic definition of time to which Avicenna subscribed – it is nonetheless supposed to be the measure or quantity. Now some might argue, so Qaysarī anticipates, that the Avicennan concept of time is in fact compatible with motion, since the latter, likewise, consists of a continuous process of extinction and renewal as a body progresses from one point in space to another.<sup>60</sup> The problem, however, with this argument is that the image of motion thus described is nothing more in reality than a purely mental construct – a product of the human estimative faculty (wahm) alone. 61 It is only one's imagination, so Qayşarī explains, that pictures movement as a sequence in which each successive part is annihilated, making way for the part immediately connected to it. But since annihilation equates to non-existence (in'idām), it cannot denote an actual reality existing outside the mind, and nor can it be *connected* (*yattaṣil*) to anything existing *in re extra* (*fī l-khārij*).<sup>62</sup> The idea of a continuum of interconnected extinctions and renewals is therefore. so we are told, a figment of the human mind; and what this means for Qaysarī is that time as conceived of by Avicenna is likewise nothing more than a mental construct with no basis in objective reality.

In his critique, then, of both Avicenna's and Ṭūsī's theories, our author touches on some of the broader vexed issues which frequently appear in medieval discussions of time. This topic's connection with the wider debate between the proponents of  $kal\bar{a}m$  atomism, on the one hand, and Aristotelian causality on the other has already been indicated. Significant too is its bearing on another key controversy of medieval thought, that of nominalism versus realism. From his comments in the  $Nih\bar{a}yat$  al- $bay\bar{a}n$  it is clear that Qayṣarī holds a strictly realist view of time. For him there can be no question of time's

<sup>59</sup> Qayṣarī, *Nihāyat al-bayān*, p. 116.

<sup>60</sup> Qayşarī, Nihāyat al-bayān, p. 116.

<sup>61</sup> Qayṣarī, Nihāyat al-bayān, p. 116.

<sup>62</sup> Qayşarī, Nihāyat al-bayān, p. 116.

<sup>63</sup> For a study of the influence of Avicenna's critique of atomism on later theologians, see Alnoor Dhanani, "The Impact of Ibn Sīnā's Critique of Atomism on Subsequent *Kalām* Discussions of Atomism," *Arabic Sciences and Philosophy* 25.1 (2015): 79–104.

For details of this debate in the context of the reception of Averroist physics among thirteenth-century Oxford scholars, see Cecilia Trifogli, Oxford Physics in the Thirteenth Century (ca. 1250–1270): Motion, Infinity, Place and Time (Leiden [a.o.]: Brill, 2000), pp. 203–61.

existing in the mind alone as "advocated by some earlier thinkers." On the contrary, time is "something real" (amr haqīqī)66 "existing in re extra." But as a real continuum existing independently of human cognition, time's nature, on Qayṣarī's view, must clearly differ from the sequence of extinctions and renewals described by Avicenna, since for Qayṣarī such a sequence can exist in the estimative faculty alone. Hence, so our author argues, instead of claiming that time exists objectively,68 Avicenna and Ṭūsī should at least, for the sake of consistency, have thrown in their lot with the subjectivist camp and defined <code>zamān</code> as a "continuous quantity <code>imagined</code> in the estimative faculty (<code>wahm</code>) and resulting from renewed and elapsed movements." To do so, however, so we are told, would entail logical consequences which jar fundamentally with the Peripatetic premises to which Avicenna and his commentator still profess to adhere. Firstly, if time existed solely in the mind then time past and time future would not exist at all, such that the term "time," when applied to them,

<sup>65</sup> Qayşarī, *Nihāyat al-bayān*, p. 124. Significantly, these earlier thinkers include Ibn 'Arabī. See infra, pp. 20–21.

<sup>66</sup> Qayşarī, Nihāyat al-bayān, p. 116.

<sup>67</sup> Qayşarī, Nihāyat al-bayān, p. 123.

<sup>68</sup> See, for example, Naṣīr al-Dīn al-Ṭūsī, *Sharḥ al-Ishārāt wa-l-tanbīhāt*, in *Kitāb al-Ishārāt wa-l-tanbīhāt*, ed. by Sulaymān Dunyā (Cairo: Dār al-ma'ārif, 1958), p. 501.

Qaysarī, Nihāyat al-bayān, p. 116. Not everyone who deemed extended time a product 69 of wahm took a subjectivist view of time in general. Fakhr al-Dīn al-Rāzī, for example, maintains that extended time is a product of the imagination but holds nonetheless that time per se is objectively real by dint of the flowing now. See Adamson, "The Existence of Time," pp. 81-82. Illustrating the relationship between extended time and the now through an analogy with motion (as he conceives of it), Fakhr al-Dīn writes: "Motion (haraka) is a term that can be used in two senses. The first is motion in the sense of the [overall] traversal [of a distance]. Now we have already shown that this has no objective existence (*lā wujūd lahu fī l-a'yān*), and hence the time [that is conceived of as an] extended reality (al-amr al-mumtadd), corresponding to motion in the sense of a traversal (bi-ma'nā l-qaṭ'), cannot possibly exist objectively either. The second is motion in the sense of actually being in the midst [of a traversal], which counts among those things that may indeed come into being in the now. It is a single, steadfast reality (amr wāḥid thābit) that continues from the beginning of the distance [traversed] to its end. We should therefore think of time in the same way. In other words, it should be said [of time that what exists externally is something indivisible that corresponds to motion in the medial sense (al-ḥaraka bi-maʿnā l-kawn fī l-wasaṭ). It will then [follow] that just as motion in the medial sense produces (taf'al) motion in the sense of a traversal, so does that indivisible reality [which is the now] produce time through its flow (yaf'al al-zamān bi-sayalānihi); and just as motion in the sense of a traversal does not exist objectively, so does that time which is [thought of as] something extended and divisible have no objective existence either. What exists of time, then, is that which is referred to as the flowing now (al-ān al-sayyāl)." Fakhr al-Dīn al-Rāzī, al-Mabāhith al-mashriqiyya fī 'ilm al-ilāhiyyāt wa-l-ṭabī'iyyāt (Hyderabad: Dā'irat al-ma'ārif al-nizāmiyya, 1924), pp. 649–50.

would be no more than a metaphor  $(maj\bar{a}z)$ .<sup>70</sup> Secondly, if time were actually identified, by contrast, with the renewals and extinctions of movement, this would amount to the equating of time with motion,<sup>71</sup> which is the concept of time espoused by the Platonists. And finally, if, having reduced time to nothing but a fleeting present, Avicenna and  $\bar{T}u\bar{s}$  were in fact equating time with the instant then – devoid of magnitude as the latter is – it could not possibly be deemed a quantity of any kind,<sup>72</sup> which again would depart from Aristotle's basic definition.

#### 3 Qayşarī and Abū l-Barakāt

In his attempt at reaching a satisfactory and consistent definition of time, Qayṣarī aims to avoid what he sees as the pitfalls of Avicenna's approach by constructing an absolutist theory in which  $zam\bar{a}n$  is a fixed, universal reality existing outside the mind and forming the ambience or container  $(zarf)^{73}$  – a concept he probably adopted from Fakhr al-Dīn al-Rāzī<sup>74</sup> – in which events supervene. With this end in view, Qayṣarī addresses his second major point of contention with the Peripatetic conception of time, namely the idea that time is a function of motion. Frustrated with what he sees as too restrictive a view of a fundamental condition of existence, Qayṣarī turns instead to a well-known critic of Avicenna, Abū l-Barakāt al-Baghdādī.<sup>75</sup> For Abū l-Barakāt (as articulated in his  $Kit\bar{a}b$   $al-Mu'tabarf\bar{i}$  l-hikma),<sup>76</sup> all that exists, irrespective of whether it is at motion or rest, cannot continue to exist save in continuous time<sup>77</sup>; hence  $zam\bar{a}n$  is the measure, not of motion, but of the act of being.<sup>78</sup>

<sup>70</sup> Qayşarī, Nihāyat al-bayān, p. 116.

<sup>71</sup> Qayşarī, Nihāyat al-bayān, pp. 116-9.

<sup>72</sup> Qayşarī, Nihāyat al-bayān, p. 119.

See Qayşarī, *Nihāyat al-bayān*, p. 116. See also the text of the Hacı Mahmud manuscript of the *Nihāyat al-bayān* (Ms Istanbul, Hacı Mahmud Efendi 1511, fol. 3v), which contains an explanatory clause (indicated here in italics) that has been omitted from Āshtīyānī's published edition, viz. "time is something real *because it is a vessel* (zarf) *for real things.*" I am grateful to Rafael Taghiyev for providing me with a copy of the Hacı Mahmud manuscript.

<sup>74</sup> al-Rāzī, *Maṭālib*, pp. 22, 28, 47–48, 63. See also Adamson, "The Existence of Time," pp. 67, 69, 89–91.

On Abū l-Barakāt's criticism of Avicenna's philosophy, see Jamāl Sīdbī, *Abū l-Barakāt al-Baghdādī wa-falsafatuhu l-ilāhiyya: dirāsa li-mawqifihi l-naqdī min falsafat Ibn Sīnā* (Cairo: Maktabat wahba, 1996); and Aḥmad al-Ṭayyib, *al-Jānib al-naqdī fī falsafat Abī l-Barakāt al-Baghdādī* (Cairo: Dār al-shurūq, 2004). See also Pines, "Abu'l-Barakāt."

<sup>76</sup> See Abū l-Barakāt, *Kitāb al-Mu'tabar*, vol. 2, p. 301.

<sup>77</sup> Qayşarī, Nihāyat al-bayān, p. 119.

<sup>78</sup> Qayṣarī, Nihāyat al-bayān, p. 119. On Abū l-Barakāt's concept of time as a measure of being, see Pines, "Abu'l-Barakāt"; and Dominique Mallet, "Zamān," in E12 (retrieved January 11,

Although at ease with the core idea of an intrinsic link between time and existence, Qayṣarī finds Abū l-Barakāt's definition in need of refinement. Being ( $wuj\bar{u}d$ ), he argues, is not actually measurable or quantifiable, as measure applies only to that which has extension and parts, whether static or dynamic. Instead, one should say that time is the measure, not of being per se, but of its continuance ( $baq\bar{a}$ ') and duration ( $daw\bar{a}m$ ).<sup>79</sup> If one were then to object that such a definition implies a logical circularity – since continuance presupposes time – the response would be that for everything else continuance is indeed an expression of its endurance ( $thub\bar{u}t$ ) from one time to another, but this is not the case with being, whose continuance is an expression of its endurance through its very nature.<sup>80</sup>

Within the broad context of late medieval thought, Qayṣarī is not alone, therefore, in his sense of dissatisfaction with the Peripatetic link between time and motion. We have already noted the case of Fakhr al-Dīn al-Rāzī; and similar sentiments are to be found in Jewish philosophy and Christian scholasticism too. In his explicit reliance upon Abū l-Barakāt there is, however, potential cause for surprise. By signing up to the idea of  $zam\bar{a}n$  as a concomitant aspect of being, our author is thus obliged to follow Abū l-Barakāt in making the scope of  $zam\bar{a}n$  co-extensive with that of  $wuj\bar{u}d$ , which means extending it beyond

<sup>2022,</sup> via http://dx.doi.org/10.1163/1573-3912\_islam\_COM\_1378). See also Muḥammad Abū Saʻda, al-Wujūd wa-l-khulūd fī falsafat Abī l-Barakāt al-Baghdādī (Cairo: Dār Abū Hurayra li-l-tibāʻa, 1993).

Qayṣarī, *Nihāyat al-bayān*, p. 119. Whereas Qayṣarī understands Abū l-Barakāt's theory as applying to universal being or *esse commune*, Fakhr al-Dīn al-Rāzī understands it as applying to the particular existence of each individual entity and therefore rejects it on the grounds that this would fracture time's objective unity, making it different for every entity. On Fakhr al-Dīn's critique of Abū l-Barakāt's theory, see al-Rāzī, *Maṭālib*, p. 75; and Adamson and Lammer, "Fakhr al-Dīn al-Rāzī's Platonist Account," pp. 101–2, 107.

<sup>80</sup> Qayṣarī, *Nihāyat al-bayān*, pp. 122–3.

See James Robinson, "Hasdai Crescas and Anti-Aristotelianism," in *The Cambridge Companion to Medieval Jewish Philosophy*, ed. by Daniel H. Frank and Oliver Leaman (Cambridge: Cambridge University Press, 2003), p. 404; Harry A. Wolfson, *Crescas' Critique of Aristotle: Problems of Aristotle's Physics in Jewish and Arabic Philosophy* (Cambridge: Harvard University Press, 1929); and Alessandro Ghisalberti, "Categories of Temporality in William Ockham and John Buridan," in *The Medieval Concept of Time*, p. 266. It is worth observing, too, that a Muslim contemporary of Qayṣarī, namely the renowned alchemist al-Jildakī (d. 743/1342), remarks that "time (*zamān*) is absolute being (*al-wujūd al-muṭlaq*) among the masters of mystical unveiling (*kashf*) and the folk of gnosis ('*irfān*)." See al-Jildakī, *Kitāb al-Burhān fī asrār 'ilm al-mīzān* (Staatsbibliothek zu Berlin, Berlin, Ms Sprenger 1916), fol. 5r. Cf. Qayṣarī: "Being's continuance and duration is a cataphatic concomitant of absolute being (*al-wujūd al-muṭlaq*); indeed, it is identical with the latter in the state of [divine] non-duality (*aḥadiyya*)." Qayṣarī, *Nihāyat al-bayān*, p. 123.

<sup>82</sup> See Abū l-Barakāt, *Kitāb al-Muʿtabar*, vol. 2, p. 301.

the lower world encompassed by the movements of the celestial spheres into the realms of the purely intelligible and the divine. This move naturally sets Qayṣarī apart from the classical Islamic consensus – broadly shared by the Peripatetic philosophers, *mutakallimūn*, and Sufis alike – which holds that God necessarily transcends time. <sup>83</sup> More specifically, in terms of its bearing on philosophy, it amounts to a rejection of the basic Neoplatonic distinction between physical and metaphysical modes of duration.

This distinction – which underpins much of the philosophical treatment of duration in both the medieval Arabic tradition and Latin scholasticism<sup>84</sup> – is especially prominent in the foundational texts of Arabic Neoplatonism. Both the *Theologia* ( $Uth\bar{u}l\bar{u}jiy\bar{a}$ ) and the *Liber de Causis* ( $Kit\bar{a}b$   $al-\bar{l}d\bar{a}h$   $f\bar{\imath}$  l-khayr al-mahd) stress the atemporal character of the transcendent One, while also highlighting the difference between the modes of duration specific to the world of generation and corruption, on the one hand, and the everlasting celestial intellects and souls on the other. Hence, in the opening pages of the *Theologia* we are told that the purpose of that work is to "treat and elucidate divine lordship, demonstrating that it is synonymous with the First Cause and that perpetuity (dahr) and time ( $zam\bar{a}n$ ) are beneath it." The *De Causis*,

<sup>83</sup> See Gerhard Böwering, "Ideas of Time in Persian Sufism," *Iran* 30.1 (1992): 80; and Lenn Goodman, "Time in Islam," *Asian Philosophy* 2.1 (1992): 17. Ibn 'Arabī, likewise, holds the view that God transcends time, as exemplified by the following quotation from the *Futūhāt*: "Time is necessarily a notional thing, not an existential one, which is why the Real has applied it to Himself when He says *God was acquainted with everything* and *to God belongs the affair, before and after*; and this is why the *Sunna* of the Prophet confirms the validity of the question someone posed to him, namely 'where was our Lord before He created His creation?' If time, then, was something that existed in its own right, the Real's transcendence with regard to all limitations would thereby be compromised as He would be constricted by the rule of time." Muḥyī l-Dīn Ibn al-'Arabī, *al-Futūḥāt al-makkiyya*, ed. by Osman Yahia (Beirut: Dār iḥyā' al-turāth al-'arabī, 1998), vol. 1, ch. 59, p. 365.

See Steel, "The Neoplatonic Doctrine of Time and Eternity"; and Olivier Boulnois, "Du Temps Cosmique à la Durée Ontologique? Duns Scot, le Temps, l'Aevum et l'Éternité," in *The Medieval Concept of Time*.

Pseudo-Aristotle (Plotinus), *Uthūlūjiyā*, in *Aflūtīn 'inda l-'arab*, ed. by 'Abd al-Raḥmān al-Badawī (Cairo: Maktabat al-nahḍa al-miṣriyya, 1955), p. 6. In similar vein, the *De Causis* states that "every true [universal] entity is either: higher than perpetuity and prior to it, or is coextensive with it, or comes after perpetuity but still above time." Pseudo-Aristotle (Proclus), *Kitāb al-Īḍāḥ fī l-khayr al-maḥḍ*, in *al-Aflāṭūniyya al-muḥdatha 'inda l-'Arab*, ed. by 'Abd al-Raḥmān al-Badawī (Cairo: Maktabat al-nahḍa al-miṣriyya, 1955), p. 4. In the *Theologia*, the One's timeless transcendence is likened – in an analogy that naturally evokes Aristotle's concept of the Unmoved Mover – to the fixed point at the centre of a circle: "The First Cause is static and motionless in itself, and exists neither in perpetuity, nor time, nor space. On the contrary, time, perpetuity, space, and all other things exist and abide through it alone. For just as the centre [of a circle] is fixed and self-subsistent,

for its part, elaborates upon the distinction between <code>zamān</code> and <code>dahr</code> (terms rendered as <code>tempus</code> and <code>aevum</code> respectively in medieval Latin translation), seeing the constant flux that characterizes time proper as consistent with the world of generation and corruption to which it belongs, whereas the everlasting intellects and souls are deemed to endure in a state of all-comprehending simultaneity (the <code>tuta simul</code> of the scholastic tradition):

From such proofs it is clear that duration  $(daw\bar{a}m)$  is of two kinds: one perpetual  $(dahr\bar{\iota})$ , the other temporal  $(zam\bar{a}n\bar{\iota})$  – notwithstanding that the first kind of duration is static and at peace, whilst the other is in motion; and the first is a simultaneous whole whose acts exist all together without some preceding others, whilst the second flows and extends, such that some of its acts are before others.<sup>86</sup>

For Qayṣarī, by contrast, the notions of perpetuity (*dahr*) and eternity (*sarmad*) appear to be logically subsumed under the core concept of *zamān*, conceived of as an attribute of the divine being.<sup>87</sup> Here again, it seems possible to detect the influence of Abū l-Barakāt who – anticipating Hobbes by several centuries<sup>88</sup> – famously opines that such durational distinctions<sup>89</sup> are, all told, mere sophistry, arguing instead that all things, however lofty, endure in time alone. Abū l-Barakāt writes:

The mind cannot in fact conceive of an existence that has no extension or time, regardless of whether it be the existence of a Creator or that of a created being. It matters little, then, what the tongues [of people] are accustomed to saying [regarding timeless existence] if the mind and reason have played no part therein! Those who have entertained such

whilst the radii issuing from it to the circumference exist and abide thereby, and the points or lines on the circumference or surface owe their existence to the centre likewise, so do intellectual and sensorial things [depend on the First Cause]." Pseudo-Aristotle (Plotinus),  $Uth\bar{u}l\bar{u}jiy\bar{u}$ , p. 130.

<sup>86</sup> Pseudo-Aristotle (Proclus), *Kitāb al-Īḍāḥ fī l-khayr al-maḥḍ*, p. 30.

<sup>87</sup> See Qayṣarī, *Nihāyat al-bayān*, pp. 119–20.

On Hobbes's dismissal of Scholastic notions of timeless eternity, see Geoffrey Gorham, "Hobbes on the Reality of Time," *Hobbes Studies* 27.1 (2014): 80–103.

Abū l-Barakāt is no doubt thinking chiefly of Avicenna, who famously defines <code>zamān</code>, <code>dahr</code>, and <code>sarmad</code> as the relationship of the changeable to the changeable, that of the changeable to the fixed, and that of the fixed to the fixed, respectively. On the reception, in Avicenna's philosophy, of the Neoplatonic distinction between time, perpetuity and eternity, see Mallet, "Zamān." See also Adamson, "The Existence of Time," p. 92; and Adamson and Lammer, "Fakhr al-Dīn al-Rāzī's Platonist Account," pp. 111–2.

notions, namely that God exists outside of time, are the same people who hold that time is the measure of motion - and since the Creator does not move, He therefore does not exist in time. For our part, we have shown that the existence of every being [whether motionless or mobile] abides in an extension, which is time, and that an existence which is not in time is inconceivable. Those, however, who have stripped their Creator's existence of time, assert by contrast that He exists in perpetuity (dahr) and eternity (sarmad), nay that His very existence is synonymous with perpetuity and eternity, thus changing the term time  $(zam\bar{a}n)$  [for another] without actually changing the meaning [...] When they are asked what then is perpetuity and what is eternity they reply that it is motionless, enduring continuance (al-baqā' al-dā'im alladhī laysa ma'ahu ḥaraka). But duration ( $daw\bar{a}m$ , from the same root as  $d\bar{a}im$ ) is an attribute of extension and time; hence it is merely the name that has changed whereas what it denotes remains the same, irrespective of whether it refers to that which moves or that which is motionless.90

### 4 Qayṣarī's Theory in Relation to Concepts of Time in Ibn 'Arabī's School

Qayṣarī's apparent empathy with Abū l-Barakāt in this regard is all the more significant as it serves to set him apart from other representatives of Ibn 'Arabī's school, who generally concur with the Avicennan philosophers in echoing the Neoplatonic distinctions between physical and metaphysical modes of duration. Thus, in the writings of Ibn 'Arabī and his student Qūnawī, zamān is peculiar to the physical world alone. As for the modes of continuance specific to the intelligible and spiritual domains beyond the world of nature, Qūnawī in particular is quite clear on this point, identifying a universal source of duration, denoted by the divine name al-dahr (Perpetuity), whose sway extends over all worlds, higher and lower alike. Accordingly, and in keeping with his conception of God's creation as a hierarchical chain of being in which intelligible realities and divine attributes are made manifest in a mode consistent with the degree of existence in question,  $^{91}$  Qūnawī conceives of al-dahr as having manifold modes (zamān being but one thereof) consistent with different

<sup>90</sup> Abū l-Barakāt, *Kitāb al-Mu'tabar*, vol. 2, p. 302. See also Pines, "Abu'l-Barakāt"; and Mallet, "Zamān."

<sup>91</sup> See Şadr al-Dīn al-Qūnawī, *I'jāz al-bayān fī ta'wīl umm al-Qur'ān*, ed. by M. Ahmed (Hyderabad: Maṭba'at jam'iyyat dā'irat al-ma'ārif al-'uthmāniyya, 1988), p. 203.

realms; and this being the case, the numerous applications in the scriptures of temporal terminology to the divine and the angelic – such as references in the Hadith to the idea that spirits were created two thousand years before bodies – are interpreted as metaphorical indications of higher modes of duration distinct from that of  $zam\bar{a}n$ .

The differences, moreover, between Qayṣarī's treatment of time and those of his Akbarian predecessors do not end there. Closer inspection reveals radical disparities between Qayṣarī's and Ibn 'Arabī's basic concepts of <code>zamān</code>. In stark contrast to Qayṣarī's realist view of time as an objective continuum, Ibn 'Arabī, as Böwering has shown, <sup>93</sup> articulates throughout his magnum opus, <code>al-Futūḥāt al-makkiyya</code>, a subjectivist position whereby time has no more than a notional existence: "time (<code>zamān</code>)," says Ibn 'Arabī, "is but a relationship (<code>nisba</code>) with no real existence in itself; yet at what length and for how long have people discussed its nature!" Elaborating upon the substance of such discussions, Ibn 'Arabī writes:

People differ over what is understood and denoted by the term time. Thus, the philosophers ( $\hbar ukam\bar{a}$ ') apply it to different things, though the majority agree that it is an imaginary extension numbered by the movements of the celestial spheres. <sup>95</sup> The theologians, for their part, apply it to something else, namely the linking of one event ( $\hbar\bar{a}dith$ ) to another about which one asks the question "when?" ( $mat\bar{a}$ ). <sup>96</sup> As for the desert Arabs, they apply it to, and mean by it, the night-time and the daytime, which is the sense we are concerned with in this chapter. Accordingly, the

See Qūnawī, I'jāz al-bayān, p. 323. For Qayṣarī, by contrast, scriptural references to divine years may well have been seen as confirmation of the notion that time extends to the higher realms. In other respects, however, Qayṣarī's treatment of cosmic epicycles and the Qur'anic concept of divine and lordly years is indebted to Ibn 'Arabī and 'Abd al-Razzāq al-Kāshānī, especially the latter's Risāla fī bayān miqdār al-sana al-sarmadiyya wa-ta'yīn al-ayyām al-ilāhiyya (Princeton University Library, Princeton, Ms Garrett 3604Yq), fols. 125–6. This is true, notably, of the fourth and final section of the Nihāyat al-bayān, though an analysis of this topic, and of Kāshānī's influence, would require a separate study.

<sup>93</sup> See Gerhard Böwering, "Ibn al-'Arabī's Concept of Time," in *Gott ist schön und Er liebt die Schönheit (Festschrift für Annemarie Schimmel*), ed. by Alma Giese and J. Christoph Bürgel, (Bern & New York: Peter Lang, 1994), pp. 71–91. For a comprehensive discussion of Ibn 'Arabī's treatment of temporality, see Mohamed Haj Yousef, *Ibn 'Arabī*: *Time and Cosmology* (London & New York: Routledge, 2008).

<sup>94</sup> Ibn 'Arabī, Futūḥāt, vol. 3, ch. 390, p. 529.

This phrase corresponds to one of the definitions of time given by the Ikhwān al-Ṣafā'.

This is, no doubt, a reference to the famous *kalām* theory of time ascribed to the Mu'tazilite theologian al-Jubbā'ī (d. 303/915). On al-Jubbā'ī's theory, which was Fakhr al-Dīn al-Rāzī's favorite proof of time's existence, see Adamson, "The Existence of Time," pp. 88–89.

night-time and daytime are the two sections of the complete day; from sunrise to sunset being called a daytime ( $nah\bar{a}r$ ), from sunset to sunrise a night-time (layl), and the complete ensemble being called a day (yawm). Now although the day is made manifest by the existence of the great movement [of the diurnal sphere], the only thing [in this process] that actually exists [outside the mind] is the moving [celestial body], which is not the same as time – whence it follows, once again, that time is a notional thing with no real essence ( $l\bar{a} \, haq\bar{q}a \, lahu$ ).

#### 5 Qayşarī's Definition of Time

Although at odds with Ibn 'Arabī over the basic concept of *zamān*, Qayṣarī sets out nonetheless to graft Abū l-Barakāt's theory onto the principles of Ibn 'Arabī's ontology. Steeped as he was in the Akbarian vision of existence as a continual theophany or revelation of God's being, <sup>98</sup> Qayṣarī seems comfortable with the notion of *zamān* as an objective reality issuing, along with the effusion of existence, from the divine essence. Indeed, in his view, as we shall see, it is this perspective alone which elucidates the fundamental aporias surrounding time's nature. For if knowledge of time's essence has historically proven so problematic, this is consistent, so we are told, with its link with being – of which it has been said that nothing is more apparent to our mind and perception, and yet nothing is more difficult to define. <sup>99</sup> For Qayṣarī, then, as for Abū l-Barakāt and Fakhr al-Dīn al-Rāzī before him, <sup>100</sup> the objective reality of time, like that of being, is self-evident, though its quiddity is elusive and obscure. <sup>101</sup>

<sup>97</sup> Ibn 'Arabī, *Futūḥūt*, vol. 1, ch. 59, pp. 365–6. In recognition, however, of time's conceptually elusive character, Ibn 'Arabī displays a generally tolerant attitude towards the different theories of time current in his day. He writes: "If you have grasped what we have said about time, you are then free to join those who say that time is the night-time, the day-time and days, or that time is an imaginary extension numbered by the celestial spheres, or that time is the linking of one event to another about which one asks the question 'when?', and so on. There is no harm in giving voice to any of these views, since they are all well established and correct to an extent in their treatment of temporal relations." Ibn 'Arabī, *Futūḥūt*, vol. 3, ch. 390, p. 530.

<sup>98</sup> See William Chittick, *The Sufi Path of Knowledge: Ibn al-'Arabi's Metaphysics of Imagination* (Albany, N.Y.: State University of New York Press, 1989), pp. 91–96. On Qayşarī's Akbarian ontology, see Dagli, *Ibn al-'Arabī and Islamic Intellectual Culture*, pp. 121–40.

<sup>99</sup> Qayşarī, Nihāyat al-bayān, p. 121.

<sup>100</sup> See Abū l-Barakāt, *Kitāb al-Mu'tabar*, vol. 2, pp. 301–2; and al-Rāzī, *Maṭālib*, p. 21. See also Adamson, "The Existence of Time," pp. 66, 73–77.

<sup>101</sup> Qayşarī, *Nihāyat al-bayān*, p. 121. Naṣīr al-Dīn al-Ṭūsī, likewise, affirms that "time's existence is obvious, though its quiddity is hidden." See Ṭūsī, *Sharḥ al-Ishārāt*, p. 500.

Relying, however, on the premise that *zamān* is the measure of being's continuance and duration, Qayṣarī offers the following definition:

Time  $(zam\bar{a}n)$  is an accidental reality  $(haq\bar{i}qa 'aradiyya)^{102}$  attendant upon the divine essence  $(l\bar{a}zima\ li-l-dh\bar{a}t\ al-il\bar{a}hiyya)$  and issuing therefrom so that through it may be measured the duration of the being of all entities, whether non-generated  $(mubda'\bar{a}t)$  or generated creatures  $(makhl\bar{u}q\bar{a}t)$ . In terms of its existence, time is an abiding, continuous quantity (kamm) inhering objectively in concrete existence outside [the mind].  $^{103}$ 

Conceived of as a concomitant ( $l\bar{a}zim$ ) of God's essence, time, like all divine attributes and acts, is thus deemed by Qayṣarī to be logically anterior to God's creation, the material and the spiritual alike<sup>104</sup>; and as such, it is too lofty a reality to be identified either with a substance (jawhar)<sup>105</sup> – a rebuttal, no doubt, on Qayṣarī's part, of the views of the two Rāzīs, Abū Bakr (d. 313/925)<sup>106</sup> and Fakhr al-Dīn, both of whom held that time was a spiritual jawhar<sup>107</sup> – or with one of a corporeal substance's concomitants (such as motion), 108 as espoused by the Aristotelian  $fal\bar{a}sifa$ .

#### 6 Time and the Eternity of the World

Like Abū l-Barakāt before him,<sup>109</sup> Qayṣarī takes the view that just as *wujūd* endures perpetually, so must its measure endure likewise. Hence, though he rejects the Peripatetic definition of time as the measure of motion, Qayṣarī's commitment to the concept of a fundamental link between time and being entails, nonetheless, a significant and potentially surprising point where he and Aristotle concur, namely their sharing the view that time endures without

<sup>102</sup> Āshtīyānī's edition of the Nihāyat al-bayān gives ḥaqīqatuhu 'araḍiyya (p. 121).

Ms Tehran, Majlis-i shūrā-yi islāmī, no. 3321, fol. 348. The idea that time is somehow accidental to the divine essence seems odd. Interestingly, this phrase has been omitted from the Hacı Mahmud Efendi manuscript, giving "time is a reality through which are measured the duration of the being of all entities ... etc" (fol. 3v).

<sup>104</sup> Qayşarī, Nihāyat al-bayān, p. 120.

<sup>105</sup> Oavsarī, Nihāvat al-bavān, p. 120.

On Abū Bakr al-Rāzī's treatment of time, see Mallet, "Zamān." See also, Muhsin Mahdi, "Remarks on al-Rāzī's Principles," *Bulletin d'études orientales* 48 (1996): 145–53.

<sup>107</sup> See al-Rāzī, *Maṭālib*, p. 87. See also Adamson, "The Existence of Time," pp. 74, 92; and Adamson and Lammer, "Fakhr al-Dīn al-Rāzī's Platonist Account," pp. 95–98, 109, 111.

<sup>108</sup> Qayşarī, Nihāyat al-bayān, p. 120.

<sup>109</sup> See Abū l-Barakāt, *Kitāb al-Muʿtabar*, vol. 2, p. 301.

beginning or end. Hom this point of agreement alone, of course, it does not automatically follow that our author was also a supporter of the ancient Greek (and pre-eminently Aristotelian) doctrine of the eternity of the world in general  $^{111}$  – a proposition which Abū Ḥāmid al-Ghazālī (d. 505/1111) famously condemned in his  $Tah\bar{a}fut$  al- $fal\bar{a}sifa$  – though there are, as we shall see shortly, persuasive grounds for assuming that this was in fact the case. What does follow clearly, however, from Qayṣarī's notion of beginningless time is that he rejects the  $kal\bar{a}m$  theory – driven by the tenets of creationist scripture – of there being a first temporal instant. How  $^{112}$ 

Initially voiced by John Philoponus (d. 570 CE) and later emulated by the mutakallimūn and the pioneering Muslim philosopher al-Kindī (d. ca. 260/873),<sup>113</sup> the theory of a first instant marking the start of time – which was conceived of as a creationist counter-argument to Greek notions of the beginninglessness of both time and the cosmos - was founded, as is well known, on the assertion that an eternity a parte ante would mean that an infinite past would have to be traversed in order to reach the present, which, so the theologians argue, is impossible. 114 While Qayşarī, admittedly, makes no explicit mention of this argument, it does seem possible to detect a tacit rebuttal of its underlying rationale in his remarks regarding the wholly relative nature of the concept of azal or eternity a parte ante. Just as the very notions - so he observes - of past and future are nothing more in truth than subjective, relative concepts, dependent on the human observer and divorced as such from the objective reality of time as a whole, so too is its notional division at any given point into azal or past without beginning and abad or future without end.115

<sup>110</sup> Qayşarī, Nihāyat al-bayān, pp. 125, 127.

On the controversy surrounding the eternity of the world in medieval Islamic and Jewish philosophy, see Ernst Behler, *Die Ewigkeit der Welt: problemgeschichtliche Untersuchungen zu den Kontroversen um Weltanfang und Weltunendlichkeit im Mittelalter, 1: Die Problemstellung in der arabischen und jüdischen Philosophie des Mittelalters* (München: F. Schöningh, 1965). See also, Herbert Davidson, *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy* (Oxford: Oxford University Press, 1987); and Rudolph Ulrich, "Abd al-Raḥmān al-Jāmī (d. 898/1492) on the Eternity of the World," *The Muslim World* 107.3 (2017): 537–48.

On this theory, see Böwering, "Ideas of Time in Persian Sufism," p. 80; and Toby Mayer, "Avicenna against Time Beginning. The Debate between the Commentators on the *Ishārāt*," in *Classical Arabic Philosophy: Sources and Reception*, ed. by Peter Adamson (London: Warburg Institute, 2007), pp. 125–49.

<sup>113</sup> See Goodman, "Time in Islam," p. 11; and Jean Jolivet, "Al-Kindī, vues sur le temps," *Arabic Sciences and Philosophy* 3 (1993): 55–75.

<sup>114</sup> See Böwering, "Ideas of Time in Persian Sufism," p. 80.

<sup>115</sup> Qayşarī, Nihāyat al-bayān, p. 127.

Among Islamic conceptions of time, the *kalām* theory outlined above was not the only creationist-inflected alternative to Aristotelian eternalism, for the Muslim Platonist, Abū Bakr al-Rāzī had famously challenged the Peripatetic mainstream by arguing that, whilst time may exist perpetually, the world for its part was created at a certain point in time's indefinite span. 116 Might Qaysarī, then, have held a similar view? On balance, this is unlikely. True, one phrase in particular (taken at face value and in isolation from the rest of the *Nihāyat* al-bayān) may appear to suggest otherwise, namely an assertion that both non-generated entities  $(mubda'\bar{a}t)$  – such as the universal intellects on the top rungs of the cosmological ladder – and generated creatures (*makhlūgāt*) alike are "preceded" (masbūq) by time. 117 Immediately afterwards, however, our author – invoking Avicenna's well-known distinction between priority in essence (bi-l- $dh\bar{a}t$ ) and temporal anteriority – explains that in the case of the *mubda* 'āt the anteriority in question is simply an expression of time's essential priority (as a concomitant of the divine essence) over God's creation, not a temporal priority as such. $^{118}$  In terms, then, of their manifest existence – as distinct from their respective metaphysical ranks – time and the *mubda'āt*, so we are told, endure co-extensively. Hence, rather than coming into being in time, the universal intellects are deemed instead to abide along with time<sup>119</sup>; and since time is everlasting, 120 the *mubda'āt* must endure sempiternally without temporal beginning or end. 121 Having explained this nuance, Qayşarī then feels free to modify his earlier assertion about the non-generated entities, stating in a subsequent passage (quoted below) that the *mubdaʿāt* are *not*, in fact,

<sup>116</sup> See Peter Adamson, "Galen and Abū Bakr al-Rāzī on Time," in *Medieval Arabic Thought:*Essays in Honour of Fritz Zimmermann, ed. by Rotraud Hansberger, M. Afifi al-Akiti, and
Charles Burnett (London: Warburg Institute, 2012), pp. 1–14.

<sup>117</sup> Qayşarī, Nihāyat al-bayān, p. 120.

<sup>118</sup> Qayşarī, Nihāyat al-bayān, p. 120.

Qayṣarī, *Nihāyat al-bayān*, pp. 119 and 127. The premises underpinning Qayṣarī's rejection of the celestial entities' coming into being in time are therefore fundamentally different from those articulated in the following passage from the *Theologia*: "If you wish to know how the true, everlasting, noble entities come into existence from the First Principle, you must [first] banish from your mind any thought of their coming into being in time (*zamān*). On the contrary, they originate from [the First Principle] and were made by it non-temporally, without any intermediary whatsoever between themselves and their active Creator. How, indeed, could they have come into being in time when they themselves are the immediate cause of time, and of temporal becoming and its order and nobility. The cause of time cannot, therefore, be under the sway of time, but must instead be in some loftier and more elevated type [of duration, in relation to which time is] like the shadow to the object that casts it." Pseudo-Aristotle (Plotinus), *Uthūlūjiyā*, p. 114.

<sup>120</sup> Qayṣarī, *Nihāyat al-bayān*, p. 127.

<sup>121</sup> Qayşarī, Nihāyat al-bayān, pp. 119, 127.

preceded by time; providing, that is, that one takes into account the distinction between temporal priority and priority in essence:

You should know that the continuous existential magnitude, which has no beginning or end, is divisible, as we have already seen, by dint of the events which supervene therein, into days, weeks, months and years – so that, through such [divisions], one may know the duration of transient beings [subject to generation and corruption]; and through [these divisions], likewise, the existential duration of transient creatures preceded by time may be distinguished from that of the non-generated entities which are not preceded by it, in terms of existence at least. 122

All told, such evidence suggests that Qayṣarī did in fact broadly share with the Avicennan  $fal\bar{a}sifa$  the view that the cosmos, or at least its higher echelons, endured without temporal beginning or end. Like Avicenna, however, he is also keen to show that such a view is not incompatible in and of itself with the concept of a Creator who, "through His essence  $(dh\bar{a}t)$  and all His names and attributes, is prior to  $(muqaddam \ 'al\bar{a})$  all the beings  $(mawj\bar{u}d\bar{a}t)$  that emanate from Him."  $^{123}$ 

#### 7 Qayṣarī's Synthesis

Qayṣarī's concept of time is, therefore, an eclectic hybrid composed of elements selected from a range of divergent theories. Like Fakhr al-Dīn al-Rāzī before him (though without al-Rāzī's exhaustive rigor), he sifts through the competing temporal models of his day with the aim, not of discarding them altogether, but of identifying and combining their respective strengths and of filtering out their respective weaknesses. We have seen, for example, that in its stance towards the account of time elaborated by Avicenna and the Arabic Aristotelians, the *Nihāyat al-bayān* is by no means wholly critical. Thus, whilst accusing Avicenna of implicit temporal atomism in the *Ishārāt*, Qayṣarī still sides with him in rejecting the claim – supported by the *mutakallimūn* in general – that time admits of a first instant. Likewise, though he joins Abū l-Barakāt al-Baghdādī and Fakhr al-Dīn al-Rāzī in challenging the definition of time as the number of motion, our author remains attached nonetheless to the Peripatetic categorization of time as an accident (albeit of the divine

<sup>122</sup> Qayşarī, Nihāyat al-bayān, p. 127.

<sup>123</sup> Qayşarī, Nihāyat al-bayān, p. 120.

essence, in Qayṣarī's case, rather than the diurnal sphere) not a self-subsisting substance as Fakhr al-Dīn contends.

Where Qayṣarī differs appreciably, however, from the standard accounts of time in the Muslim world is in his assertion that, despite appearances to the contrary, time is in fact a static  $(q\bar{a}rr)$  and integral whole, rather than a dynamic  $(ghayr\ q\bar{a}rr)$  flux that exists only as a succession of elapsing parts or instants. Responding to the familiar Aristotelian objection that if time were static then past, present, and future would coincide, Qayṣarī writes:

If by saying that it is impossible for [time] to be essentially static ( $q\bar{a}rr$ *al-dhāt*), since today would be together with the past and the future, you mean that something happening today would – if [time] were static – coincide with something happening in the past and the future, then that much is granted. But if what you mean thereby is that the part [of time] in which the events of today occur would therefore exist along with the part in which occur the events of the past or future, we cannot accept that this is impossible. For the parts of this static thing [that is time] all exist together, and none of them is [intrinsically] past, future, or present, which is why it has been said that for God there is no morning or evening, no past or future. Rather, such things [as past and future] exist only in relation to us. The illusory impression (tawahhum) that there is a segment of parts called the past merely arises from the impression that [time] is not essentially static, or from the passing away of what happened therein. Hence time's threefold division [into past, present, and future] is through the events that occur therein, not through time as it is in itself.124

In this connection, it is to be noted, Qayṣarī even departs from his own previously-held view – evidenced by a brief remark in his commentary on Ibn 'Arabī's *Fuṣūṣ al-ḥikam* – which endorsed the mainstream categorization of time as *ghayr qārr* or dynamic.<sup>125</sup> What kinds of considerations, then, might

Qayṣarī, *Nihāyat al-bayān*, p. 114. Qayṣarī reiterates this point towards the end of his treatise: "Now just as the movement [of the sphere] makes time specific (*yu'ayyinuhu*) by making it a day, week, month, and year, so too is it determined by the existence or absence [therein] of events, which make it into something past, future or present; for the existential magnitude prior to this event then comes to be [perceived as] past. In and of itself, however, it is neither past, future, or present. Rather, such notions are merely projected onto it by [considering it] in relation to the existence or non-existence of a given event, as we explained in the first section." Qayṣarī, *Nihāyat al-bayān*, p. 127.

<sup>125</sup> See Qayşarī, *Sharḥ-i Fuṣūṣ al-ḥikam*, p. 15. On the notion of time as *ghayr qārr*, see, for example, al-Rāzī, *Maṭālib*, pp. 45, 66. See also Adamson, "The Existence of Time," pp. 86–87.

have persuaded our author to revise his opinion? First and foremost – one may venture – there is the problem of how to square, on the one hand, the commonplace premise that time is a succession of elapsing instants with, on the other, his mature conviction that time is not only objectively real but is an extended ambience or vessel (zarf) in which events supervene - a concept, as we have seen, that he appears to have borrowed from Fakhr al-Dīn al-Rāzī. Although Qaysarī does not elaborate on the concept of the zarf at length, brief indications in the *Nihāyat al-bayān* (as preserved in the text of the Hacı Mahmud Efendi manuscript) suggest nonetheless that he thought a static account of time's nature suited this concept better than a dynamic one. The remarks in question come during Qayṣarī's critique of the idea that time is a succession of extinctions and renewals. In what is possibly an allusion to the views of Fakhr al-Dīn al-Rāzī – who, whilst deeming time a zarf, categorizes it nevertheless as non-static – Qayşarī argues that "time is something real (*amr haqīqī*) because it is a vessel for real things,"126 whereas if time were nothing but an indivisible instant between a non-existent past and future it "would not be a vessel for events." 127

#### 8 Conclusion

Although Qayṣarī's treatment of time is derivative to a large extent – reliant as it is on Abū l-Barakāt and Fakhr al-Dīn al-Rāzī's reactions to the Avicennan tradition – it is another telling example, nonetheless, of a late medieval tendency away from the Aristotelian view of time as the measure of motion, a tendency that gathered pace not only in the Muslim world but in Jewish philosophy and Christian scholasticism as well. This, however, is not to say that Qayṣarī's treatise is devoid of originality. For one thing, we have noted how he modifies Abū l-Barakāt's concept of time, whilst also melding it with features of Ibn 'Arabī's ontology; and for another, he takes the unusual position of arguing that Avicenna's account of time in the *Ishārāt* is a betrayal of the basic Aristotelian premise that time is a continuous quantity, a premise that Qayṣarī, for his part, is keen to defend despite his opposition to other aspects of Aristotle's discussion of time's nature.

The most original element, though, in Qayṣarī's conception of  $zam\bar{a}n$  would also appear to be the most problematic, namely his bold claim that time is  $q\bar{a}rr$  al- $dh\bar{a}t$  or essentially static. Though he sees this categorization as better suited, than the conventional dynamic view, to the notion of time as both an

<sup>126</sup> Ms Istanbul, Hacı Mahmud Efendi 1511, fol. 3v.

<sup>127</sup> Qayşarī, Nihāyat al-bayān, p. 116.

indefinitely divisible continuum and an objectively existent vessel for events, it jars fundamentally nonetheless with our basic experience of time as something that elapses.

Finally, for a figure who is associated primarily with the Akbarian school, it is noticeable that Qayṣarī's staunchly realist account of time is at odds with the subjectivist stance adopted by Ibn 'Arabī. It is possible that Qayṣarī's critical independence on this score may have been encouraged by Ibn 'Arabī's expression of tolerance towards different traditional definitions of time, in recognition of its conceptually elusive character. Either way, it seems clear that, where this notoriously subtle topic was concerned, Qayṣarī felt at liberty to look elsewhere and draw on a wider array of philosophical sources.

#### **Appendix**

The Arabic text of Qayṣarī's dedication to his patron: from an 11th/17th century manuscript of the *Nihāyat al-bayān fī dirāyat al-zamān* (Ms Tehran, Majlis-i shūrā-yi islāmī, no. 3321, fol. 342), copied from Qayṣarī's autograph, dated the end of Dhū l-Ḥijja 735 (August 1335).

ولما فرغت من تحريرها شرفتها بألقاب المولى المعظّم الصاحب الأعظم مالك أزمّة موالي العالم <sup>128</sup> أعلم علماء العصر فريد حكماء الدهر مرتي الضعفاء والمساكين معين الفقراء السالكين مشير أرباب الدول القاهرة نصير أصحاب الحُلَل الفاخرة ظهير الملّة والحقّ والدين <sup>129</sup>أد امرا لله ظلال جلاله على العالمين <sup>130</sup> لا زال الحقّ نصيرًا لجناب عزّه ودولته وظهيرًا لأعوان ملكه ورفعته لتدوم بدوام إقباله وتسعد بجمال

Likewise, in the dedication to Orhan at the start of al-Itḥāf al-Sulaymānī fī l-ʿahd al-Ūrkhānī:

In the list of honorific titles in the Iznik vakfiye Orhan is described as:

ظهيرالإسلام

130 A similar phrase appears in the dedication of the *Itḥāf*:

لازال ظلال سلطنتهاممدودة

<sup>128</sup> Cf. Orhan's honorific titles as documented in the Iznik *vakfiye*:

"When I had finished composing it I ennobled it with the honorific titles (alqāb) of the august sovereign (al-mawlā l-mu'azzam), the grand companion (al-ṣāḥib al-a'zam), holder of the reins of the sovereigns of the world (mālik azimmat mawālī l-'ālam), most learned scholar of our age, the singular philosopher of all time, succour of the weak and destitute, helper of the poor wayfarers [on the Sufi path], commander of the patriarchs of victorious dynasties, patron of the wearers of splendid raiment, supporter of the faithful, of the truth, and of religion (zahīr al-milla wa-l-ḥaqq wa-l-dīn), long may God preserve the shadow of his majesty over the worlds, and may God remain the protector of his renown and his dynasty and remain the supporter of the servants of his kingdom and high rank, that they might abide through His watchful care and achieve felicity [in the hereafter] through the beauty of His majesty [...] And may he correct any disturbance [that occurs] therein through his judgements made radiant with brilliant light, and may he set aright any lapses [that happen] therein with his insight that penetrates the most splendid pearls."

#### Acknowledgements

I am grateful to Professor Mohammed Rustom and Professor Peter Adamson for their comments on earlier drafts of this article.

#### Bibliography

#### **Manuscripts**

Jildakī, Aydamir al-. *Kitāb al-Burhān fī asrār 'ilm al-mīzān*. Staatsbibliothek zu Berlin, Berlin, MS Sprenger 1916.

Kāshānī, 'Abd al-Razzāq al-. *Risāla fī bayān miqdār al-sana al-sarmadiyya wa-ta'yīn al-ayyām al-ilāhiyya*. Princeton University Library, Princeton, MS Garrett 3604Yq.

Qayşarī, Sharaf al-Dīn Dāwūd ibn Maḥmūd al-Rūmī al-. *Nihāyat al-bayān fī dirāyat al-zamān*. Süleymaniye Library, Istanbul, Ms Hacı Mahmud Efendi 1511.

<sup>131</sup> In the dedication of the *Itḥāf* the author says of Orhan and his son:

- Qayṣarī, Sharaf al-Dīn Dāwūd ibn Maḥmūd al-Rūmī al-. *Nihāyat al-bayān fī dirāyat al-zamān*. Kitābkhānā-yi majlis-i shūrā-yi islāmī, Tehran, MS Majlis-i shūrā-yi islāmī, no. 3321.
- Qayṣarī, Sharaf al-Dīn Dāwūd ibn Maḥmūd al-Rūmī al-. *Taḥqīq māʾ al-ḥayāt wa-kashf astār al-zulumāt*. Princeton University Library, Princeton, мs Garrett 464H.

#### **Printed Sources**

- Badawī, ʿAbd al-Raḥmān (ed.). *al-Aflāṭūniyya al-muḥdatha ʿinda l-ʿarab*. Cairo: Maktabat al-nahda al-misriyya, 1955.
- Badawī, 'Abd al-Raḥmān (ed.). *Aflūṭīn 'inda l-ʿArab*. Cairo: Maktabat al-nahḍa al-miṣriyya, 1955.
- Baghdādī, Abū l-Barakāt Hibat Allāh ibn ʿAlī al-. *Kitāb al-Muʿtabar fī l-ḥikma*. Ed. by Muḥammad ʿUthmān. Cairo: Maktabat al-thaqāfa al-dīniyya, 2015.
- Ibn al-ʿArabī, Muḥyī l-Dīn. *al-Futūḥāt al-makkiyya*. Ed. by Osman Yahia. Beirut: Dār iḥyāʾ al-turāth al-ʿarabī, 1998.
- Ibn Sīnā, Abū 'Alī al-Ḥusayn. *Kitāb al-Ishārāt wa-l-tanbīhāt*. Ed. by Sulaymān Dunyā. Cairo: Dār al-maʿārif, 1958.
- Ibn Sīnā, Abū 'Alī al-Ḥusayn. *Avicenna. The Physics of* The Healing: *A Parallel English-Arabic Text in Two Volumes*. Trans. by Jon McGinnis. Provo, Utah: Brigham Young University Press, 2009.
- Khalīfa, Ḥājjī. *Kashf al-zunūn ʿan asāmi l-kutub wa-l-funūn*. Ed. by Muḥammad Yāltaqāyā and Rifʿat al-Kilīsī. Istanbul: Wikālat al-maʿārif, 1941–43.
- Pseudo-Aristotle (Plotinus). *Uthūlūjiyā*. In *Aflūṭīn ʻinda l-ʻarab*. Ed. by ʻAbd al-Raḥmān al-Badawī. Cairo: Maktabat al-nahḍa al-miṣriyya, 1955, pp. 3–164.
- Qayşarī, Sharaf al-Dīn Dāwūd ibn Maḥmūd al-Rūmī al-. *Nihāyat al-bayān fī dirāyat al-zamān*. In *Rasā'il-i Qayṣarī bā ḥavāshī-i Muḥammad Rizā Qumshāhī*. Ed. by Jalāl al-Dīn Āshtīyānī. Mashhad: Mu'assasah-i chāp va intishārāt va girāfīk-i dānishgāh-i firdawsī, 1974.
- Qayṣarī, Sharaf al-Dīn Dāwūd ibn Maḥmūd al-Rūmī al-. *Sharḥ-i Fuṣūṣ al-ḥikam*. Ed. by Jalāl al-Dīn Āshtīyānī. Tehran: Sharikat-i intishārāt-i 'ilmī va farhangī, 1996.
- Qayṣarī, Sharaf al-Dīn Dāwūd ibn Maḥmūd al-Rūmī al-. Zamān az dū nigāh: tarjumah-i risālah-i Qayṣarī az zamān va ta'līqah-i mu'ammā-yi zamān / ta'līf-i Dāvud ibn Maḥmūd ibn Muḥammad Qayṣarī; tarjumah-i Ṭūbá Kirmānī. Trans. by Ṭūbá Kirmānī. Tehran: Dānishgāh-i Tihrān, 2000.
- Qūnawī, Ṣadr al-Dīn al-. *I'jāz al-bayān fī ta'wīl umm al-Qur'ān*. Ed. by M. Ahmed. Hyderabad: Maṭba'at jam'iyyat dā'irat al-ma'ārif al-'uthmāniyya, 1988.
- Rāzī, Fakhr al-Dīn al-. *al-Mabāḥith al-mashriqiyya fī ʻilm al-ilāhiyyāt wa-l-ṭabī'iyyāt*. Hyderabad: Dā'irat al-ma'ārif al-niẓāmiyya, 1924.
- Rāzī, Fakhr al-Dīn al-. *al-Maṭālib al-ʿāliya min al-ʿilm al-ilāhī*. Ed. by Aḥmad Ḥijāzī al-Saqqā. Beirut: Dār al-kitāb al-ʿarabī, 1987.

Ṭūsī, Naṣīr al-Dīn al-. *Sharḥ al-Ishārāt wa-l-tanbīhāt*. In *Kitāb al-Ishārāt wa-l-tanbīhāt*. Ed. by Sulaymān Dunyā. Cairo: Dār al-maʿārif, 1958.

#### Secondary Literature

- Abū Saʻda, Muḥammad Ḥusaynī. *al-Wujūd wa-l-khulūd fī falsafat Abī l-Barakāt al-Baghdādī*. Cairo: Dār Abū Hurayra li-l-ṭibāʻa, 1993.
- Adamson, Peter. "Galen and Abū Bakr al-Rāzī on Time." In *Medieval Arabic Thought:* Essays in Honour of Fritz Zimmermann. Ed. by Rotraud Hansberger, M. Afifi al-Akiti, and Charles Burnett. London: Warburg Institute, 2012, pp. 1–14.
- Adamson, Peter. "The Existence of Time in Fakhr al-Dīn al-Rāzī's *Maṭālib al-ʿāliya.*" In *The Arabic, Hebrew and Latin Reception of Avicenna's Physics and Cosmology*. Ed. by Dag Nikolaus Hasse and Amos Bertolacci. Berlin: De Gruyter, 2018, pp. 65–100.
- Adamson, Peter, and Andreas Lammer. "Fakhr al-Dīn al-Rāzī's Platonist Account of the Essence of Time." In *Philosophical Theology in Islam: Later Ash'arism East and West.* Ed. by Ayman Shihadeh and Jan Thiele. Leiden [a.o.]: Brill, 2020, pp. 95–122.
- Ali, Mukhtar H. The Horizons of Being: The Metaphysics of Ibn al-Arabī in the Muqaddimat Al-Qayşarī. Leiden [a.o.]: Brill, 2020.
- Ali, Mukhtar H. *Philosophical Sufism: an Introduction to the School of Ibn al-'Arabi*. London & New York: Routledge, 2021.
- Bayrakdar, Mehmet. *La philosophie mystique chez Dawud de Kayseri*. Ankara: Editions Ministère de la Culture, 1990.
- Bayrakdar, Mehmet. "Dâvûd-i Kayseri." In *Türkiye Diyânet Vakfı Islâm Ansiklopedisi*. Istanbul: Türkiye Diyânet Vakfı, 1995, vol. 1X, pp. 33–35.
- Bayrakdar, Mehmet. Dâvûd el-Kayserî. Istanbul: Kurtuba Kitap, 2009.
- Behler, Ernst. Die Ewigkeit der Welt: problemgeschichtliche Untersuchungen zu den Kontroversen um Weltanfang und Weltunendlichkeit im Mittelalter, 1: Die Problemstellung in der arabischen und jüdischen Philosophie des Mittelalters. München: F. Schöningh, 1965.
- Boulnois, Olivier. "Du Temps Cosmique à la Durée Ontologique? Duns Scot, le Temps, l'Aevum et l'Éternité." In *The Medieval Concept of Time: the Scholastic Debate and its Reception in Early Modern Philosophy*. Ed. by Pasquale Porro. Leiden [a.o.]: Brill, 2001, pp. 161–88.
- Böwering, Gerhard. "Ideas of Time in Persian Sufism." Iran 30.1 (1992): 77–89.
- Böwering, Gerhard. "Ibn al-'Arabī's Concept of Time." In *Gott ist schön und Er liebt die Schönheit (Festschrift für Annemarie Schimmel*). Ed. by Alma Giese and J. Christoph Bürgel. Bern & New York: Peter Lang, 1994, pp. 71–91.
- Böwering, Gerhard. "The Concept of Time in Islam." *Proceedings of the American Philosophical Society Held at Philadelphia for Promoting Useful Knowledge* 141.1 (1997): 55–66.

- Brockelmann, Carl. *Geschichte der arabischen Litteratur* (*Supplementband II*). Leiden [a.o.]: Brill, 1938.
- Chittick, William. "The Five Divine Presences: From al-Qunawi to al-Qayseri." Muslim World 72 (1982): 107–28.
- Chittick, William. *The Sufi Path of Knowledge: Ibn al-'Arabi's Metaphysics of Imagination*. Albany, N.Y.: State University of New York Press, 1989.
- Chittick, William. "The School of Ibn 'Arabī." In *History of Islamic Philosophy*. Ed. by Seyyed Hossein Nasr and Oliver Leaman. London & New York: Routledge, 2001, pp. 510–23.
- Coope, Ursula. *Time for Aristotle: Physics IV. 10–14*. Oxford: Oxford University Press, 2005.
- Dagli, Caner K. *Ibn al-Arabī and Islamic Intellectual Culture: From Mysticism to Philosophy*. London & New York: Routledge, 2016.
- Davidson, Herbert. *Proofs for Eternity, Creation and the Existence of God in Medieval Islamic and Jewish Philosophy*. Oxford: Oxford University Press, 1987.
- Dhanani, Alnoor. "The Impact of Ibn Sīnā's Critique of Atomism on Subsequent *Kalām* Discussions of Atomism." *Arabic Sciences and Philosophy* 25.1 (2015): 79–104.
- Dhanani, Alnoor. "Atomism." In *EI*<sup>3</sup>. Ed. by Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas and Everett Rowson. Retrieved January 11, 2022, via http://dx.doi .org/10.1163/1573-3912\_ei3\_COM\_24249.
- Fazlıoğlu, İhsan. "What Happened in Iznik? The Shaping of Ottoman Intellectual Life and Dāwūd Kaysari." *Nazariyat: Journal for the History of Islamic Philosophy and Sciences* 4.1 (2017): 1–61.
- Georgeon, François, and Frédéric Hitzel (eds.). Les Ottomans et le temps. Leiden [a.o.]: Brill, 2012.
- Ghisalberti, Alessandro. "Categories of Temporality in William Ockham and John Buridan." In *The Medieval Concept of Time: the Scholastic Debate and its Reception in Early Modern Philosophy*. Ed. by Pasquale Porro. Leiden [a.o.]: Brill, 2001, pp. 255–86.
- Goodman, Lenn E. "Time in Islam." Asian Philosophy 2.1 (1992): 3-19.
- Gorham, Geoffrey. "The Twin-Brother of Space': Spatial Analogy in the Emergence of Absolute Time." *Intellectual History Review* 22.1 (2012): 23–39.
- Gorham, Geoffrey. "Hobbes on the Reality of Time." *Hobbes Studies* 27.1 (2014): 80–103. Haj Yousef, Mohamed. *Ibn 'Arabī: Time and Cosmology*. London & New York: Routledge, 2008.
- Hasnaoui, Ahmad. "Certain Notions of Time in Arab-Muslim Philosophy." In *Time and the Philosophies*. N.p.: UNESCO Press, 1977, pp. 49–79.
- Hitzel, Frédéric. "De la clepsydre à l'horloge. L'art de mesurer le temps dans l'Empire ottoman." In *Les Ottomans et le temps*. Ed. by François Georgeon and Frédéric Hitzel. Leiden [a.o.]: Brill, 2012, pp. 13–37.

Homerin, Th. Emil. *The Wine of Love and Life: ibn al-Fāriḍ's al-Khamrīyah and al-Qayṣarī's Quest for Meaning.* Chicago: Middle East Documentation Center, 2005.

- Hussain, Ali. "Dāwūd al-Qayṣarī." In *E1*<sup>3</sup>. Ed. by Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas and Everett Rowson. Retrieved January 11, 2022, via http://dx.doi.org/10.1163/1573-3912\_ei3\_COM\_25946.
- Inalcik, Halil. *The Ottoman Empire: The Classical Age* 1300–1600. London: Phoenix Press, 2000.
- Inwood, Michael. "Aristotle on the Reality of Time." In *Aristotle's Physics: A Collection of Essays*. Ed. by Lindsay Judson. Oxford: Clarendon Press, 1991, pp. 151–78.
- Jackson, Peter, and Charles Melville. "Gīāt al-Dīn." In *Encyclopædia Iranica*. Ed. by Ehsan Yarshater, vol. x. London and New York: Routledge, 2001, pp. 598–9.
- Jackson, Peter. *The Mongols and the Islamic World: From Conquest to Conversion*. New Haven and London: Yale University Press, 2017.
- Jolivet, Jean. "Al-Kindī, vues sur le temps." *Arabic Sciences and Philosophy*  $_3$  (1993):  $_55^-75$ .
- Koca, Özgür. *Islam, Causality, and Freedom: From the Medieval to the Modern Era.* New York: Cambridge University Press, 2020.
- Kreiser, Klaus. "Les tours d'horloge ottomans: inventaire préliminaire et remarques générales." In *Les Ottomans et le temps*. Ed. by François Georgeon and Frédéric Hitzel. Leiden [a.o.]: Brill, 2012, pp. 61–74.
- Lammer, Andreas. *The Elements of Avicenna's Physics: Greek Sources and Arabic Innovations*. Berlin: De Gruyter, 2018.
- Lettinck, Paul. Aristotle's Physics and Its Reception in the Arabic World, with an Edition of the Unpublished Parts of Ibn Bājja's Commentary of the Physics. Leiden [a.o.]: Brill, 1994.
- Lowry, Heath W. *The Nature of the Early Ottoman State*. Albany: State University of New York Press, 2003.
- MacDonald, Duncan B. "Continuous Re-Creation and Atomic Time in Muslim Scholastic Theology." *Isis* 9 (1927): 326–44.
- Mahdi, Muhsin. "Remarks on al-Rāzī's Principles." *Bulletin d'études orientales* 48 (1996): 145–53.
- Mallet, Dominique. "Zamān." In *E1*<sup>2</sup>. Ed. by Peri Bearman, Thierry Bianquis, Emeri van Donzel, Clifford Bosworth and Wolfhart Heinrichs. Retrieved January 11, 2022, via http://dx.doi.org/10.1163/1573-3912\_islam\_COM\_1378.
- Mayer, Toby. "Avicenna against Time Beginning. The Debate between the Commentators on the *Ishārāt*." In *Classical Arabic Philosophy: Sources and Reception*. Ed. by Peter Adamson. London: Warburg Institute, 2007, pp. 125–49.
- McGinnis, Jon. "The Topology of Time: an Analysis of Medieval Islamic Accounts of Discrete and Continuous Time." *The Modern Schoolman* 81 (2003): 5–25.

- Melville, Charles. "The End of the Ilkhanate and After: Observations on the Collapse of the Mongol World Empire." In *The Mongols' Middle East: Continuity and Transformation in Ilkhanid Iran*. Ed. by Bruno De Nicola and Charles Melville. Leiden: Brill, 2016, pp. 309–36.
- Nony, Sylvie. "Les audaces de la physique arabe du XIIe siècle dans la synthèse d'Abū l-Barakāt al-Baghdādī (m. 1152)." *Mélanges Institut dominicain d'études orientales du Caire* 29 (2012): pp. 27–50.
- Pines, Shlomo. *Nouvelles Etudes sur* Awḥad al-zamān *Abū-l-Barakāt al-Baghdādī*. Paris: Durlacher, 1955.
- Pines, Shlomo. Beiträge zur islamischen Atomenlehre. Gräfenhainichen: Heine, 1936.
- Pines, Shlomo. "Abu'l-Barakāt." In *EI*<sup>2</sup>. Ed. by Peri Bearman, Thierry Bianquis, Emeri van Donzel, Clifford Bosworth and Wolfhart Heinrichs. Retrieved January 11, 2022, via http://dx.doi.org/10.1163/1573-3912\_islam\_SIM\_0167.
- Robinson, James T. "Hasdai Crescas and Anti-Aristotelianism." In *The Cambridge Companion to Medieval Jewish Philosophy*. Ed. by Daniel H. Frank and Oliver Leaman. Cambridge: Cambridge University Press, 2003, 391–413.
- Rosenthal, Franz. "Ibn 'Arabī between Philosophy and Mysticism: Ṣūfism and Philosophy Are Neighbours and Visit Each Other." *Oriens* 31 (1988): 1–35.
- Rustom, Mohammed. "Dāwūd Qayṣarī: Notes on His Life, Influence, and Reflections on the Muḥammadan Reality." *Journal of the Muhyiddin Ibn 'Arabi Society* 38 (2005): 51–64.
- Sambursky, Samuel and Shlomo Pines. *The Concept of Time in Late Neoplatonism*. Jerusalem: Israel Academy of Sciences and Humanities, 1971.
- Sīdbī, Jamāl Rajab. *Abū l-Barakāt al-Baghdādī wa-falsafatuhu l-ilāhiyya: dirāsa li-mawqifihi l-naqdī min falsafat Ibn Sīnā*. Cairo: Maktabat wahba, 1996.
- Steel, Carlos. "The Neoplatonic Doctrine of Time and Eternity and Its Influence on Medieval Philosophy." In *The Medieval Concept of Time: the Scholastic Debate and Its Reception in Early Modern Philosophy*. Ed. by Pasquale Porro. Leiden a.o.: Brill, 2001, pp. 3–31.
- Stoltz, Daniel A. "Positioning the Watch Hand: 'ulama' and the Practice of Mechanical Timekeeping in Cairo, 1737–1874." *International Journal of Middle East Studies* 47.3 (2015): 489–510.
- Țayyib, Aḥmad al-. *al-Jānib al-naqdī fī falsafat Abī l-Barakāt al-Baghdādī*. Cairo: Dār al-shurūq, 2004.
- Todd, Richard. *The Sufi Doctrine of Man: Ṣadr al-Dīn al-Qūnawī's Metaphysical Anthro-pology*. Leiden [a.o.]: Brill, 2014.
- Trifogli, Cecilia. Oxford Physics in the Thirteenth Century (ca. 1250–1270): Motion, Infinity, Place and Time. Leiden [a.o.]: Brill, 2000.
- Ulrich, Rudolph. "Abd al-Raḥmān al-Jāmī (d. 898/1492) on the Eternity of the World." *The Muslim World* 107.3 (2017): 537–48.

Uzunçarşılı, Ismail Hakkı. "Orhan Gazi'nin vefat eden oğlu Süleyman Paşa için tertip ettirdiği vakfiyenin aslı." *Belleten* 27, no. 107 (1963): 437–51.

- Van Ess, Josef. 60 Years After: Shlomo Pines's Beiträge and Half a Century of Research on Atomism and Islamic Theology. Jerusalem: Israel Academy of Sciences and Humanities, 2002.
- Wolfson, Harry Austryn. *Crescas' Critique of Aristotle: Problems of Aristotle's Physics in Jewish and Arabic Philosophy*. Cambridge: Harvard University Press, 1929.