Studies in History and Philosophy of Science 54 (2015) 11–19

Contents lists available at ScienceDirect

Studies in History and Philosophy of Science

journal homepage: www.elsevier.com/locate/shpsa

Henry More and the development of absolute time

Emily Thomas

University of Groningen, Faculty of Theology & Religious Studies, Oude Boteringestraat 38, 9712 GK Groningen, Netherlands

ARTICLE INFO

Article history:
Received 10 February 2015
Received in revised form
19 May 2015
Available online 30 July 2015

Keywords:
Henry More;
Absolute time;
Absolute space;
Cartesianism;
Newton

ABSTRACT

This paper explores the nature, development and influence of the first English account of absolute time, put forward in the mid-seventeenth century by the 'Cambridge Platonist' Henry More. Against claims in the literature that More does not *have* an account of time, this paper sets out More's evolving account and shows that it reveals the lasting influence of Plotinus. Further, this paper argues that More developed his views on time in response to his adoption of Descartes' vortex cosmology and cosmogony, providing new evidence of More's wider project to absorb Cartesian natural philosophy into his Platonic metaphysics. Finally, this paper argues that More should be added to the list of sources that later English thinkers – including Newton and Samuel Clarke – drew on in constructing their absolute accounts of time.

1. Introduction

In the mid seventeenth century, the 'Cambridge Platonist' Henry More (1614–1687) developed the first English account of absolute time, on which time is connected with God's duration.[1] This paper details the Platonic nature of More's views on time, argues that their development is connected with More's Cartesianism, and discusses their influence on subsequent English thinkers.

The paper proceeds as follows. Section 2 explains how I understand 'absolutism', before exploring the evolution of More's absolutism about time. I argue that the Platonic account More provides in 1647 is deeply connected to the later account that he advances from 1655, evidencing the long shadow that Plotinus cast over his work. Along the way, I correct various misperceptions in the scholarship, including the thesis that More does not *have* views on time. Section 3 asks what led More to develop an absolute account of time in 1647, and argues that the answer lies in More's newfound Cartesian cosmology and cosmogony. This provides a new illustration of More's wider project to combine Cartesian natural philosophy with Platonic metaphysics, and puts a fresh twist on the development of early modern theories of absolute time more generally. With a view to opening a path for further scholarship, Section 4 sketches the ways that More's account of time may have influenced later English thinkers, including the great absolutist, Newton himself. Section 5 concludes. More's neglected views on time were both rich and potentially influential.

2. More and the nature of absolute time

2.1. Introducing absolutism about time

More is an 'absolutist' and a 'substantivalist' about time. Both notions are difficult to define and this paper simply stipulates their meanings, in ways I take to be compatible with the scholarship. I label 'absolutism' the thesis that time is *independent* of things – with the possible exception of God – including motions, material bodies and human minds.[2] Absolutism is usually taken to involve what I will label 'substantivalism', the thesis that time is *real*, an

E-mail address: a.e.e.thomas@rug.nl.

[1] For a general overview of More's life and works, see Hutton (2008).

[2] Earman (1989, 11) provides a rare extended discussion of Newtonian absolutism and takes one sense of absoluteness to be that there is an absolute duration, 'independent of the path connecting the events'. Ariotti (1973, 31) describes absolute time as 'independent of external motion'. Hutton (1977, 363) refers to the 'measure of independence' accorded to absolute time. Edwards (2013, 1) writes that absolute time is 'wholly independent' of anything 'external', including motion and the human soul.

http://dx.doi.org/10.1016/j.shpsa.2015.06.003
0039-3681/

existing being.[3] For More, absolutism is inextricably twined with substantivalism.

Absolutism can be contrasted with Aristotelian theories of time. I will give a (very) brief history of the pertinent philosophy of time, as it will prove useful below.

For Aristotle, time is the 'number' of motion (*Phys* 219b1). The idea is that, in the same way we perceive the greater or lesser by number – such as a greater or lesser number of substances – we perceive greater and lesser motion by time. For Aristotle, time appears to depend on the soul, for numbers and times are counted, and only souls can count (*Phys* 223a22). Further, Aristotle associates time with the measure of the outermost 'celestial sphere' (*Phys* 223b18-24). In the Aristotelian universe, the earth is immobile, and it is surrounded by rotating spheres. The celestial bodies – the moon, sun and stars – are fixed to the spheres, and the motion of the spheres explains the motion of the heavenly bodies (*Cael* 289b32-3). Aristotle argues the universe is finite (*Cael* 271b26). The universe neither came into being nor admits of destruction (*Cael* 283b22-3); it is a 'steady state' universe. The movement of the outermost celestial sphere provides an excellent starting point for our understanding of time because it is uniform, standard and *measurable*. For example, one revolution of the sphere measures a day, and a day can be used to measure other motions, such as a sea voyage. Aristotelian cosmology was modified somewhat by Ptolemy in the second century, who introduced many more celestial spheres to account for the irregular movements of the sun, moon and planets; the movements of the stars were still held to be regular.

Following the introduction of Aristotle's texts into twelfth century Western philosophy, Aristotelian philosophy of time came to dominate. The vast majority of subsequent accounts of time exhibited one or two Aristotelian themes: time is dependent on individual human souls; or, time is the movement (or the measure of the movement) of the outermost celestial sphere. These themes can be found in a wide range of thinkers, including Averroes, Albertus Magnus, Aquinas, Peter Aureol, Copernicus, Toletus, Galileo, Hobbes and Descartes. Very gradually, from the sixteenth century onwards, non-Aristotelian accounts were developed that took time to be independent of human souls and celestial motions. Scholars have argued that such absolute or quasi-absolute accounts can be found in a tiny minority of thinkers, including Bernadino Telesio, Giordano Bruno, Francesco Patrizi and Francisco Suárez.[4]

Around the 1640s, absolute accounts of time were developed by Pierre Gassendi and Jan Baptist van Helmont. From 1665 to 1666, Isaac Barrow set out what is sometimes said to be the 'first' English account of absolute time. As we will see, this is quite untrue. More developed his absolutism two decades earlier, contemporaneous with Gassendi and van Helmont.

2.2. More's evolving account of absolute time

There is very little literature on More's account of time, and some of the few scholars who have written on it claim that More does not *have* substantive views on time. For example, whilst J. T. Baker (1930, 14) credits More with introducing absolute space and time into English philosophy – and reads More as conceiving time as an attribute of God – Baker provides almost no discussion and claims that More 'had but little' to say of time. Others go further. A. E. Burtt (1924, 149-154) claims, 'More was not much interested in time', and credits Barrow as being the first to develop an absolute account of time. Majorie Nicolson (1959, 158) briefly states that More advocated an absolute account of time in his *Poems* but adds that it was less More than Barrow who formulated the theories of absolute time that were developed by thinkers such as Newton. Max Jammer (2006, 69) argues that Barrow's philosophy of time 'appears to have been strongly influenced' by More's philosophy of *space*, overlooking More's account of time. Steffen Ducheyne (2008, 217) writes, 'More … said nothing of substance on absolute time' and denies that More equated time with eternal duration; I will say more on the latter below.

Even scholars who do not overlook More's account of time have surprisingly little to say about it. David Leech's recent study of More's rational theology discusses More's spatial views over several chapters, yet Leech (2013, 141) addresses More's views on time in just one solitary footnote. Jasper Reid's impressive (2012) study of More's metaphysics discusses various aspects of More's system as it relates to time but does not discuss the nature of time itself. Alan Gabbey (1982, 192-3) states that absolutism about space and time is an 'implied assumption' in More's letters to Descartes and to Conway, but Gabbey does not expand on this.

This section will rebuff the misperception that More lacks substantive views on time, and greatly expand on the existing scholarship that allows More holds views on time. More actually advances two accounts of time: an early account given in 1647, and a later account given from 1655 onwards. Below, I will show that these accounts are deeply connected.

We will begin with More's early account of time. More's 1642 *Psychodia Platonica* draws on neo-Platonism to characterise the universe as a sequence of eight emanations. More argues that the 'Platonicall Triad' that comprises the first three of these emanations – Ahad, Aeon and Psyche – can be unified with the Christian Trinity. Ahad, the One, is unified with the Christian God; Aeon, the Platonist mind, is unified with the Christian son of God, Christ; and Psyche, the Platonic Soul, is unified with the Christian Holy Spirit (*Poems* 10-12)[5]. As we descend from Ahad, the emanations become less real, until the eighth emanation – '*hyle*' or matter – barely exists. Matter is infinitely remote from God's goodness and perfection, leading to More's disparagement of it as 'perverse' and an 'old hag' (*Poems* 54). *Psychodia Platonica* does not offer an account of time, though there are passing references. For example, in the context of describing Psyche, More briefly writes, 'O life of Time, and all Alterity!' (*Poems* 13).

Psychodia Platonica was reprinted in More's 1647 *Philosophical Poems*, and More added lengthy notes to the new edition. One of these notes is an extensive commentary on More's earlier description of Psyche:

> For what is time but the perseverance of the motion of the soul of the world, while she by her restless power brings forth these things in succession, that Eternity hath at once altogether. For such is the nature of *Aeon* or *Eternity*, viz. A life exhibiting all things at once, and in one …

[3] Sklar (1977, 162) characterises 'substantivalism' as the view that space or spacetime has an 'independent reality … a kind of substance'. For Earman (1989, 11) 'substantivalism' is another sense of absolutism: space or time 'forms a substratum that underlies physical events'.

[4] On the Aristotelian view that time depends on soul, see Edwards (2013, 1-115). On the changing philosophies of time leading up to, and during, the early modern period more generally, see Ariotti (1973), Hutton (1977), Duhem (1985, 296-330), and discussions sprinkled throughout Pasnau (2011).

[5] I cite More's works by abbreviated titles and page numbers; where appropriate, I follow with chapter/section numbers. "Poems" refers to the 1878 *Complete Poems of Henry More*. "Conway Letters" refers to the 1992 *Conway Letters*. "Dialogues" refers to the 1743 *Divine Dialogues*. "Metaphysicum" refers to the *Enchiridium Metaphysicum*, in the 1679 *Opera Omnia*; "Metaphysics" refers to Jacob's 1995 translation. "Antidote" refers to the *Antidote Against Atheism*; "Descartes Letters" refers to More's Descartes correspondence; "Cabbalistica" refers to *Conjectura Cabbalistica*; these latter three texts are collected – with individual paginations – in More's 1662 *A Collection of Several Philosophical Writings*.