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Article

Was there an association made between Geocentrism and Anthropocentrism before the Copernican Revolution?

Houve uma associação feita entre Geocentrismo e Antropocentrismo antes da Revolução Copérnica?

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ABSTRACT

Some post-Copernican authors, such as Bernard de Fontenelle and Cyrano de Bergerac, mention an association between geocentrism and anthropocentrism that was broken by the Copernican model. This argument has been criticized by authors such as A. O. Lovejoy, Remi Brague, and Dennis R. Danielson, who argue that the geocentric model of the Universe humiliated man rather than glorified him, since the Earth, as the center of the Universe, was seen as the filthy part of the Universe. So, living on the Earth was not considered a noble status for Man. In this paper, however, I will show that living in the coarser part of the Universe had also been seen in conjunction with having a noble status, and that there was indeed an association made between geocentrism and anthropocentrism before the Copernican Revolution.

Keywords: Anthropocentrism, Copernicus, geocentrism, Giovanni Pico della Mirandola, Thomas Aquinas, Bernard de Fontenelle, Cyrano de Bergerac

RESUMO

Alguns autores pós-copernicanos, como Bernard de Fontenelle e Cyrano de Bergerac, mencionam uma associação entre geocentrismo e antropocentrismo que foi quebrada pelo modelo copernicano. Este argumento foi criticado por autores como A. O. Lovejoy, Remi Brague e Dennis R. Danielson, que argumentam que o modelo geocêntrico do Universo mais humilhou o homem do que o glorificou, uma vez que a Terra, como centro do Universo, foi vista como a parte imunda do Universo. Assim, viver na Terra não era considerado um status nobre para o Homem. Neste artigo, no entanto, mostrarei que viver na parte mais grosseira do Universo também era visto em conjunto com um status nobre, e que havia de fato uma associação feita entre geocentrismo e antropocentrismo antes da Revolução Copérnica.

Palavras-chave: Antropocentrismo, Copérnico, geocentrismo, Giovanni Pico della Mirandola, Tomás de Aquino, Bernard de Fontenelle, Cyrano de Bergerac.

Introduction

Since the twentieth century, the association made between geocentrism and anthropocentrism by some pre-Copernican authors began to be denied by C. S. Lewis, A. O. Lovejoy and A. H. Armstrong, and more recently Remi Brague and Dennis Danielson. These authors argue that there was no association made between geocentrism and anthropocentrism before Copernicus' heliocentric model because geocentrism emphasizes man's humility, not his nobility. The Earth consists of the four elements (air, fire, earth, water), and since these elements are mutable and corruptible, the sublunary region was seen as inferior to the heavenly region, which consists of the incorruptible element ether. John Wilkins (1614–1672) summarizes this idea as follows: "First, from the vileness of our earth, because it consists of a more sordid and base matter than any other part of the world; and therefore must be situated in the centre, which is the worst place, and at the greatest distance from those purer incorruptible bodies, the heavens" (Wilkins, 1802, p. 190). Therefore, Brague and others conclude that if the Earth as the center of the Universe consists of the inferior elements, the centrality of the Earth cannot be the reason for human narcissism. For them, the centrality of the Earth can only be the reason for Man's humility.

However, after the Copernican Revolution, we can see people who thought that Copernicanism dealt a major blow to human narcissism. For instance, Bernard de Fontenelle's (1657–1757) book, *Conversations on the Plurality of Worlds*, was published in 1686, and Aphra Behn translated it into English in 1688 under the title, *A Discovery of New Worlds*. The character of the philosopher in Fontenelle's book likens people who think that "all this vast frame of nature was defined to our use" to an Athenian fool "who fancied that all the ships that came into the port of Piraeus belonged to him..." (Fontenelle, 2012, p. 13), and continues as follows:

For if a philosopher be asked, for what all this prodigious number of fixed stars serve (since a very few would supply the business of the whole) he will tell you gravely, that they were made to please our sight. Upon this principle, as first, man believed that the Earth was immoveably fixed in the centre of the universe, whilst all the celestial bodies (made only for her) were at the pains of turning continually round, to give light to the Earth... (Fontenelle, 2012, p. 13).

Then, the character of Madam la Marquise in Fontenelle's book says to the philosopher that she thinks that Copernicus "had no great kindness for the Earth." The philosopher answers her, "I am extremely pleased with him [Copernicus] ... for having humbled the vanity of mankind, who had usurped

the first and best situation in the universe; and I am glad to see the Earth under the same circumstances with the other planets" (Fontenelle, 2012, p. 17). As is seen, Fontenelle mentions that there was an association made between living at the center of the Universe and the vanity of mankind, and for him, Copernicus humbled this vanity.

Another example can be given from Cyrano de Bergerac (1619–1655):

Just as a man whose vessel is sailing along the coast thinks that he is motionless and the shore is moving, men turning with the earth around the sky thought it was the sky itself that was turning around them. Add to that the intolerable pride of human beings, which persuades them that nature has been made for them alone... (de Bergerac, 2019, p. 7).

Now, the following questions should be answered: if there was not any association made between geocentrism and anthropocentrism, and if the centrality of the world can be the only reason for Man's humility since the world's place is the filthiest part of the cosmos, then why did Fontenelle, de Bergerac and others such as Voltaire¹ and Giacomo Leopardi (see Leopardi, 1882, pp. 167–178) believe that Copernicanism humbled Man's vanity?

Interestingly, Bague and later Danielson accept that Saadia Gaon, a medieval Jewish philosopher made an association between geocentrism and anthropocentrism. Gaon states:

Even though creatures are many in number, nevertheless we need not be confused in regard to which constitutes the goal of creation.... When we find the earth in the center of the heaven with the heavenly spheres surrounding it on all sides, it becomes clear to us that the thing which was the object of creation must be on the earth. Upon further investigation of all {of the world's} parts we note that the earth and water are both inanimate, whereas we find that beasts are irrational. Hence only man is left, which gives us the certainty that he must unquestionably have been the intended purpose of creation (quoted by McDonough, 2020, p. 128).

Bague ignores Gaon since "he is utterly out of tune with the rest of the mediaeval concert" (Bague, 1997, p. 193; see also Bague, 2009, pp. 208–209). Danielson also shares Bague's idea about Gaon. Then, if Gaon was the only one who made such an association – let me again ask – why did Fontenelle, de Bergerac, Voltaire and Leopardi state that there was an association between geocentrism and a human-centered view of the cosmos? My answer to this question would be simpler: Fontenelle and others thought that there was an association made between geocentrism and anthropocentrism because there were people who made this association in the medieval period.

In the next section, I will show that contrary to Bague's and Danielson's claim, there were people who did not see any contradiction in believing both that the geocentric view of the world ennoble Man and the Earth is the worst part of the cosmos. Then I will show that not only Gaon but Giovanni Pico della Mirandola and, more importantly, Thomas Aquinas associated geocentrism with anthropocentrism before the Copernican Revolution.

Note, this paper does not discuss whether anthropocentrism or non-anthropocentrism can be deduced from geocentrism. Rather, it discusses that the world as the filthiest part of the cosmos was not seen by some as an obstacle for the nobility of Man who live in this coarsest part of the Universe, and that Gaon was not the only one who associated geocentrism with anthropocentrism before the Copernican Revolution, so authors such as Fontenelle and de Bergerac were right by saying that Copernicanism dealt a major blow to human narcissism.

¹ See my quotation from Voltaire below.

1. Geocentrism as a Human-Centered View of the Cosmos

Remi Brague, in his *Geocentrism as a Humiliation for Man*, published in 1997, argues that “the assertion that geocentrism put man at the peak of the physical universe” (Brague, 1997, p. 199) is false; instead, Brague supports the idea of C. S. Lewis according to which “the Medieval Model is, if we may use the word, anthropoperipheral. We are creatures of the Margin” (Lewis, 1964, p. 58; Brague, 1997, p. 199). Since the periphery of the Universe consists of a nobler substance (which is incorruptible) than the substances of the center (which are corruptible), mankind represents the periphery of the Universe, not the center of it.² Brague gives the following example of the anthropoperipheral view from Maimonides:

The heart of every living being possessing a heart is in its middle; thus the other ruled parts surround it wholly in that it is protected and safeguarded by them in such a way that harm coming from outside cannot rapidly reach it. Now in the world as a whole, the position is the opposite. Its nobler part surrounds its inferior part, for the former is secure against receiving an influence from what is other than itself. And even if it were capable of receiving such an influence, it would not find outside itself another body that could influence it. Accordingly, this part occasions an overflow into what is inside it, whereas no influence reaches it in any respect nor any force deriving from bodies other than itself. With regard to this point there is also a certain similarity. For in the living being, a part is less noble than other parts to the extent to which it is far off from the ruling part, whereas other parts are nearer to the latter. The position in the world as a whole is the same. For whenever the bodies are near the center, they grow dimmer and their substance coarser, and their motion becomes more difficult, while their light and transparency disappear because of their distance from the noble, luminous, transparent, moving, subtle, and simple body – I mean heaven. On the other hand, whenever bodies are near the latter, they acquire some of these characteristics because of their proximity to it and achieve a certain superiority over what is lower than they (Maimonides, 1963a, p. 192).

In this view, humans are represented at the periphery of the Universe even though they live at the center. The periphery consists of nobler, immutable, incorruptible substances which are seen in conformity with the human soul, while the substances at the center of the Universe are coarser and corruptible, which is seen in conformity with the human body. Since what identifies a human is his soul, which is also incorruptible, instead of the center, the margin of the Universe was seen as suitable for mankind. The periphery of the Universe refers to the ontological middle. As Brague states: “Aristotle carefully distinguishes two acceptions of centrality: the center as a merely geometrical concept on the one hand, and the middle as the ontological heart or core of a thing on the other hand, are not to be mistaken for one another” (Brague, 1997, pp. 196–197).³ In the anthropoperipheral view, the nobleness of mankind is still expressed with the word ‘middle’; however, this is not the geometrical middle but the ontological middle. The Anthropoperipheral view was a result of the idea that the ontological center cannot be the Earth since it consists of coarse and corruptible substances. When we look at Danielson and Brague and others such as A. H. Armstrong, Arthur O. Lovejoy, Clive S. Lewis, and E. M. W. Tillyard, they all argue the same thing; namely, the Earth, which consists of the coarser and dimmer substance of the Universe, cannot be the reason for human narcissism.⁴ For them, geocentrism refers to the Earth as the humblest of all places in the Universe, so it can be the only reason for Man’s humbleness.

Now, I will discuss the words of Montaigne, Mirandola, and Aquinas, whose words were also quoted

² According to Aristotelian cosmology, the Earth consists of four mutable, corruptible elements called earth, water, air and fire, while the superlunary region consists of the incorruptible element, ether.

³ For ontological center, see also Granada (2004, p. 96).

⁴ For Armstrong’s explanations in Plotinus, see (1967, p. 69, fn.); for Lovejoy, Lewis, and Tillyard, see Lovejoy (2001, pp. 101–102), Lewis (1964, p. 58), Tillyard (1960, p. 36).

by Danielson to show his readers that the pre-Copernican period saw the center of the Universe as the coarse and filthy part, instead of a place of privilege. Danielson's quotation from Montaigne is as follows: "This creature [Man] knows and sees that he is lodged down here, among the mire and shit of the world, bound and nailed to the deadest, most stagnant part of the universe, in the lowest storey of the building, the farthest from the vault of heaven..." (Montaigne, 1991, p. 505; see also Danielson, 2001, p. 1031). Then Danielson quotes from Mirandola who sees the Earth as "...the excremental and filthy parts of the lower world..." (Mirandola, 2012, p. 113; see also Danielson, 2001, p. 1031). He lastly quotes from Aquinas who says, "In the universe at large, just as the Earth — contained by all things and dwelling in the very midst — is the most material and the most ignoble of all bodies, so the highest sphere is the most essential and most noble."⁵

However, if we look at the rest of Montaigne's words not quoted by Danielson, it can be seen that besides saying that Man feels lodged in the filthy part of the world, Montaigne also argues that a human has been seen as an arrogant and proud creature that attributes himself some divine qualities; by doing so, Man separates himself from other creatures. Let me quote the rest of Montaigne's words:

...his [Man's] characteristics place him in the third and lowest category of animate creatures, yet, in thought, he sets himself above the circle of the Moon, bringing the very heavens under his feet. The vanity of this same thought makes him equal himself to God; attribute to himself God's mode of being; pick himself out and set himself apart from the mass of other creatures; and (although they are his fellows and his brothers) carve out for them such helpings of force or faculties as he thinks fit (Montaigne, 1991, p. 505).

For Montaigne, not only does a human believe that he lives in the filthy part of the cosmos, but he is also the proudest creature since he believes that he has divine qualities. The reason Danielson quotes from Montaigne is to show us that in the pre-Copernican period, people believed that they lived in a filthy Earth, which can only prove their humility, not their nobility. This means that we cannot mention any association between human narcissism and geocentrism in the pre-Copernican period. However, when we consider the rest of Montaigne's words, they do not support Danielson's argument. For Montaigne, people believe they were the proudest creatures and that they lived in a filthy world.

Montaigne was not a pre-Copernican philosopher⁶, but Mirandola (1463–1494) was, and Danielson quotes the above-mentioned words of Mirandola for the same reason, that is, as a proof of the association between geocentrism (or the filthiness of the world) and human's humility. Now, let me quote further words from Mirandola:

...there is nothing to be seen more wonderful than man. This opinion is seconded by Mercury's saying: "A great miracle, Asclepius, is man." ... At length, it seemed to me that I had come to understand why man is the most fortunate of beings and therefore worthy of all admiration, and what finally is the condition that befell him in the universal order, a condition to be envied not only by beasts but even by the stars and the intelligences dwelling beyond this world... In accordance with the laws of His mysterious wisdom, God the supreme Father and Architect had already fashioned this worldly home we behold, this most sacred temple of His divinity. He had already adorned the

⁵ Thomas Aquinas, *Commentary to Aristotle's De Caelo; Opera Omnia*, "Leonina Edition" (Rome, 1886), 3:202. Quoted and translated by Danielson (2014, p. 157).

⁶ Even though Danielson also quoted Montaigne's words, I want to separate him from Mirandola and Aquinas, whose words were also quoted by Danielson, for two reasons: first, Montaigne was not a pre-Copernican philosopher, rather he supported the Copernican model; second, Montaigne did not believe that the center is the filthy part of the Universe; instead, he said that people believe that, on the one hand, the Earth is the coarsest part of all bodies, but on the other hand, they attribute to themselves divine qualities. It is better to place Montaigne next to Fontenelle and de Bergerac. However, as I show below, Mirandola and Aquinas believed both the filthiness of the center (the Earth) and the man-centered view of the cosmos.

super celestial region with intelligences, enlivened the heavenly globes with eternal souls, and filled the excremental and filthy parts of the lower world with a multitude of forms of animal life. But when the work was finished, the Craftsman still longed for there to be someone to ponder the meaning of such a magnificent achievement, to love its beauty and to marvel at its vastness. So, when everything was done (as Moses and Timaeus testify), He finally thought to bring forth man... We have set you at the centre of the world so that from there you may more easily gaze upon whatever it contains (Mirandola, 2012, pp. 109–117).

Mirandola is arguing that **Man is worthy of all admiration** among other beings; and God **filled the excremental and filthy parts of the lower world** with a multitude of forms of animal life. Man was created lastly ‘to be there to be someone to ponder the meaning of such a magnificent achievement, to love its beauty and to marvel at its vastness’; and **Man was set at the center of the world** so that from there he may more easily gaze upon whatever it contains. It is clear that for Mirandola, there is no contradiction between being worthy of all admiration and living in an excremental and filthy part of the world which is at the centre of the Universe. Mirandola’s words, which were quoted by Danielson, also cannot be used for his argument. As an author who lived in the pre-Copernican period, Mirandola clearly associates geocentrism with a human-centered view of the cosmos. As you remember, Danielson and Brague argued that the only pre-Copernican author who associated geocentrism and anthropocentrism was Gaon, but as is seen, Mirandola also made this association.

Now, let us examine the quotation of Danielson from Thomas Aquinas, according to which, ‘In the universe at large, just as the Earth — contained by all things and dwelling in the very midst — is the most material and the most ignoble of all bodies, so the highest sphere is the most essential and most noble.’ Danielson also gives place to these words of Aquinas to show his readers that the center was seen by medieval thinkers as the coarse and filthy part of the Universe, which proves Man’s humility. However, even though Aquinas thinks that the Earth is the coarsest of all bodies, he also has an anthropocentric view. Aquinas disagrees with Maimonides’ idea, according to which, as stated by Aquinas in his *Objection 6*, “it were not a wise craftsman who would make very great instruments for the making of a small work” (Aquinas, 2018, p. 351). In his *Reply to Objection 6*, he explains why he disagrees this idea of Maimonides:

This is the argument of Rabbi Moses who endeavors to prove (Dux errantium iii) that the world was by no means made for man’s use. Wherefore he maintains that what we read in the Old Testament about the renewal of the world, as instanced by the quotations from Isaias, is said metaphorically: and that even as the sun is said to be darkened in reference to a person when he encounters a great sorrow so as not to know what to do (which way of speaking is customary to Scripture), so on the other hand the sun is said to shine brighter for a person, and the whole world to be renewed, when he is brought from a state of sorrow to one of very great joy. But this is not in harmony with the authority and commentaries of holy men. Consequently we must answer this argument by saying that although the heavenly bodies far surpass the human body, yet the rational soul surpasses heavenly bodies far more than these surpass the human body. Hence it is not unreasonable to say that the heavenly bodies were made for man’s sake... (Aquinas, 2018, pp. 352–353).⁷

Aquinas disagrees with the view of the elder Maimonides, according to which the heavenly bodies were not made for the sake of a human being. However, in Maimonides’ early writings, we can also see his belief that everything was created for the sake of man, which is described by Jeffrey K.

⁷ John H. Wright also notes that for Aquinas, “Sun and moon illuminate the earth for man’s benefit; man by reason of his soul is superior to them” (Wright, 1957, p. 144).

McDonough 'anthropocentric teleology'. In his *Commentary on the Mishnah*, written in his twenties, he writes: "The purpose of the world and everything that is in it, is just: a wise and good individual man" (quoted by McDonough, 2020, p. 128). However, in his later writing, called the *Guide of the Perplexed*, Maimonides notes:

Know that the majority of the false imaginings that call forth perplexity in the quest for the end of the existence of the world as a whole or the end of every part of it have as their root an error of man about himself and his imagining that all that exists exists because of himself alone... (Maimonides, 1963b, pp. 505–506).⁸

Aquinas saw the center (the Earth) as 'the most material and coarsest of all bodies', but he also believed that the heavenly bodies were made for the sake of Man. Therefore, we can conclude from the words of Montaigne, Mirandola, Gaon and Aquinas that the association made by Danielson and others between the filthiness of the center and the humility of humans does not work in every instance. Contrary to Danielson's and Brague's claim, Gaon, Mirandola, and Aquinas' belief in the center as the coarsest parts of all bodies in the Universe did not stop them holding a man-centered view of the cosmos.

When we consider both the heavenly bodies⁹ as the things which were made for the sake of man and Aquinas' Aristotelian cosmology, we can see that Aquinas links the central position of the Earth in the Universe with his anthropocentric view of the cosmos. However, I do not say that geocentrism entails anthropocentrism. What I mean is that when Aristotelian cosmology is taken into consideration, saying that the heavenly bodies were made for the sake of man refers to the association made by Aquinas between geocentrism and a human-centered view of the cosmos.¹⁰

The circular motions of the heavenly bodies are the reason for life in the Earth; the causes of days and nights and seasons, of every generation and corruption on the Earth, the life cycles of animals and plants, life and death, hot and cold, and so on. As Aquinas states:

Since every multitude proceeds from unity, and since what is immovable is always in the same way of being, while what is moved has many ways of being, it must be observed that throughout the whole of nature, all movement proceeds from the immovable. Therefore the more immovable certain things are, the more are they the cause of those things which are most movable. Now the heavenly bodies are of all bodies the most immovable, for they are not moved save locally. Therefore the movements of bodies here below, which are various and multiform, must be reduced to the movement of the heavenly bodies, as to their cause (Aquinas, 1952, p. 589).

If those bodies – which are responsible for all above-mentioned causes, such as generation and corruption on the Earth – were made for the sake of man just because Man's soul is superior to those bodies, then we can conclude that all those bodies in the superlunary region turn around the stationary Earth just for the sake of Man. Cyrano de Bergerac ridicules this idea by saying:

... since the earth needs the light, the heat and the influence of this great fire, it rotates around it to receive equally in all its parts this preservative virtue. For it would be just as ridiculous to think that this great glowing body turned around some irrelevant point than to imagine that, when we see a roasted skylark, the fireplace must have been rotated around it in order to cook it. Otherwise, if it were the sun's job to carry out this chore, it would seem to follow that medicine needs its patient, that the strong man should bow to the weak man and the great man serve the little man, and that, rather

⁸ For a comparison between Gaon and Maimonides, see Lamm (1965).

⁹ For Aquinas and the heavenly bodies, see Russell (1967).

¹⁰ For Aristotle's anthropocentric teleology, see Sedley (1991).

than a ship steering a course around the coasts of a province, the province would need to be moved around the vessel (de Bergerac, 2019, p. 6).

In his *Micromegas*, Voltaire speaks of the above-mentioned idea of Aquinas saying that a Thomist who wore an academic square cap says to the two celestial inhabitants who have visited the Earth that all answers can be found in the *Summa* of Saint Thomas. Later, the Thomist tells the two celestial inhabitants the following: “everything, [your] persons, [your] worlds, [your] suns, [your] stars, had been made uniquely for man.” Therewith, “two travellers fell about, choking with that irrepressible laughter...” (Voltaire, 2006, p. 105–106).¹¹

Conclusion

In this paper, contrary to the claims of Lewis, Lovejoy, Armstrong, Brague and Danielson, I have shown that thinking Man lives at the filthy part (the center) of the Universe was not an obstacle to believing Man has a noble status, and that there was an association made between geocentrism and anthropocentrism before the Copernican Revolution by giving examples from – in addition to Jewish theologian Gaon mentioned by Brague and Danielson – Mirandola, and Aquinas. Aquinas is especially important since he was one of the theologians titled Doctor of the Church. So, it is not hard to think that the followers of Aquinas also believed that the heavenly bodies were created for the sake of Man. When Voltaire mentions in his *Micromegas* a follower of Aquinas who says to the two aliens that ‘everything, [your] persons, [your] worlds, [your] suns, [your] stars, had been made uniquely for man’, we can see that this idea was mostly associated with Aquinas. As a result, Voltaire, de Bergerac, and Fontenelle mention that there is an association made between the geocentric model and human self-love because there were people who made such an association.

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¹¹ Biblical support can also be found for Aquinas’ denigration of the heavenly bodies (that is, Aquinas’ idea that the soul of Man is superior to the heavenly bodies) to disregard the gods of pagan. Leo Strauss writes the following: “The Bible presents the creatures in an ascending order. Heaven is lower than earth. The heavenly light-givers lack life; they are lower than the lowliest living beast; they serve the living creatures, which are to be found only beneath heaven; they have been created in order to rule over day and night: they have not been made in order to rule over the earth, let alone over man. The most striking characteristic of the biblical account of creation is its demoting or degrading of heaven and the heavenly lights. Sun, moon and stars precede the living things because they are lifeless: they are not gods. What the heavenly lights lose, man gains; man is the peak of creation. The creatures of the first three days cannot change their places; the heavenly bodies change their places but not their courses; the living beings change their courses but not their “ways”; men alone can change their “ways.” Man is the only being created in God’s image (Strauss, 1983, p. 153)”.

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