

Spring 2020

## Oh, My Stars: A New Map of the Universe in Paradise Lost

Michael R. Coats

Follow this and additional works at: [https://aquila.usm.edu/masters\\_theses](https://aquila.usm.edu/masters_theses)



Part of the [Literature in English, British Isles Commons](#)

---

### Recommended Citation

Coats, Michael R., "Oh, My Stars: A New Map of the Universe in Paradise Lost" (2020). *Master's Theses*. 731.

[https://aquila.usm.edu/masters\\_theses/731](https://aquila.usm.edu/masters_theses/731)

This Masters Thesis is brought to you for free and open access by The Aquila Digital Community. It has been accepted for inclusion in Master's Theses by an authorized administrator of The Aquila Digital Community. For more information, please contact [Joshua.Cromwell@usm.edu](mailto:Joshua.Cromwell@usm.edu).

OH, MY STARS: A NEW MAP OF THE UNIVERSE IN *PARADISE LOST*

by

Michael R. Coats

A Thesis

Submitted to the Graduate School,  
the College of Arts and Sciences  
and the School of Humanities  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Master of Arts

Approved by:

Dr. Jameela Lares Committee Chair  
Dr. Monika Gehlawat  
Dr. Christopher Foley

---

Dr. Jameela Lares  
Committee Chair

---

Dr. Matthew Casey  
Director of School

---

Dr. Karen S. Coats  
Dean of the Graduate School

May 2020

COPYRIGHT BY

Michael R. Coats

2020

*Published by the Graduate School*



THE UNIVERSITY OF  
**SOUTHERN**  
**MISSISSIPPI®**

## ABSTRACT

Milton's geographical descriptions in *Paradise Lost* are heavily influenced by his fascination with maps. Furthermore, his design of the universe in *Paradise Lost* follows a cartographic style that has led to several attempts at mapping it. These attempts, however, have followed the erroneous assumption that Earth centers the universe. As a result, cosmographical maps of *Paradise Lost* are inaccurate. I argue that Milton's universe is Deocentric and provide a new map with a pyramid design that places God at the center of Milton's universe.

## ACKNOWLEDGMENTS

I would like to thank my thesis advisor, Dr. Lares, for her time, effort, and help throughout this project. Her guidance has been frequent, much needed, and greatly appreciated. I also wish to acknowledge the help of Drs. Monika Gehlawat and Christopher D. Foley. It is no small task to serve on a thesis committee, and I am grateful for their labor. I also wish to thank Timothy Laird, who was able to render my poorly drawn figures into an amazingly clear digital image. Finally, I wish to mention the caring support of my beautiful wife, to whom I am indebted for her lovingkindness throughout this process.

## TABLE OF CONTENTS

ABSTRACT.....	ii
ACKNOWLEDGMENTS .....	iii
LIST OF ILLUSTRATIONS .....	v
THE UNIVERSE IN <i>PARADISE LOST</i> .....	6
WORKS CITED .....	46
APPENDIX.....	50

## LIST OF ILLUSTRATIONS

Figure 1. Mercator's 1586 map of Europe.....	21
Figure 2. Thirteenth century map of the universe (courtesy of Luminarium's Encyclopedia Project). .....	22
Figure 3. National Geographic's map of the Solar system with disproportioned and misplaced planets. ....	23
Figure 4. Gurteen's drawing of Milton's universe in Paradise Lost. ....	26
Figure 5. Orchard's Visual Aid for Paradise Lost. ....	27
Figure 6. Anonymous Map of Milton's Universe.....	30
Figure 7. John Himes's 1898 Map.....	32
Figure 8. Curry's Map of Milton's Cosmos.....	34
Figure 9. Robert Fludd's triangular cosmos. ....	36
Figure 10. Roslin's triangular map of the universe.....	37
Figure 11. My depiction of the universe of Paradise Lost.....	44

## THE UNIVERSE IN *PARADISE LOST*

John Milton loved maps, and in this thesis, I argue that this love of maps extended to the Deocentric design of the universe of *Paradise Lost*. We know of his passion for reading and collecting maps and books of maps. Even after he lost his vision, he still desired that he could collect maps, writing to a friend that, “Since to me, blind, pictured maps could hardly be useful, surveying as I do the actual globe with unseeing eyes, I fear that the more I paid for the book [of maps], the more I should mourn my loss” (495).

Elbert Thompson goes as far as to say that “No scholar of the seventeenth century felt a keener interest in geography than did John Milton” (149). In addition to enjoying maps, Milton also makes frequent use of his geographical knowledge in writing *Paradise Lost*. Milton includes such an abundance of geographical details that they have been removed in at least two editions.<sup>1</sup> Careful attention given to Milton’s implementation of geographical locations reveals that he designed and composed *Paradise Lost* with maps in mind. For example, Milton includes a twenty-five line list of countries/provinces in book eleven (386-411), where Michael reveals to Adam the sights that will be shown to the second Adam. But this scene is not a random listing of locations. It is a systemized grouping of areas into geographical regions and directions. The list begins with in Asia

---

<sup>1</sup> According to an email from Jameela Lares, “Richard Bentley (1662-1742) was a noted classicist whose brilliant ability to emend classical texts perhaps produced the hubris behind his claim that Milton’s masterpiece had been tampered with by his editor and that it had to be emended in his 1725 edition of the poem.” Bentley apparently did not know about Milton’s rich cartographical background and therefore did not understand why so many geographical place names appeared in the epic. The presence of such a detailed description was also beyond the needs of John Wesley’s edition of *Paradise Lost* for Methodists. He “omit[ted] the entire geographical section, splicing 387a with 411b to produce a single line” (Lares 96).



with Cambalu and moves noticeably and consistently westward to Mogul and then Russia. From there, the mention of Turkestan continues moving the perspective through the Middle East. Then the list pans systematically through eastern African locations beginning with Ercoco, which borders the Red Sea, and moving further west toward Tremisen. Milton then moves further westward to South American locations with Guiana and Peru (11.388-410). The clarity with which Milton pans over the globe in these passages shows that his fondness for maps extends further than just appreciation. Certainly, this familiarity with maps added a cartographic touch to his descriptions.

In books three and four of *Paradise Regained*, Milton retells this scene of the temptation of Christ in even more map-like detail. The list of locations is different, but the style is still noticeably cartographic. In the beginning of this scene Milton establishes his use of three out of four cardinal directions found on any map or compass:

“ . . . here thou behold'st

Assyria and her Empires antient bounds,

Araxes and the Caspian lake, thence on

As far as Indus *East*, Euphrates *West*,

And oft beyond; to *South* the Persian Bay,

And inaccessible the Arabian drouth.” (3.269-274, emphasis mine)

After these initial compass directions, Milton spends seventy-five lines in book three (275-350) listing specific cities and kingdoms along these parameters. And while the entire scene is too long to quote, instances such as “From Arachosia, from Candaor East” (314), “Of Adiabene, Media, and the South” (320), and “When Agrican with all his Northern powers” (337) should show that Milton designs this scene as if from a map.

These directions continue through to book four with Satan leading Christ to see more cities.

He brought our Saviour to the western side  
Of that high mountain, whence he might behold  
Another plain, long but in breadth not wide;  
Wash'd by the Southern Sea, and on the North. (4.25-28)

Milton here describes specific direction that would be seen from above. He then locates cities as if pointing them out on a map before mentioning more cities. At one point in book four, the descriptions begin taking on more detail. Having already established locations and their directions, Milton adds another style of cartography to his scene: topography.

To equal length back'd with a ridge of hills  
That screen'd the fruits of the earth and seats of men  
From cold Septentrion blasts, thence in the midst  
Divided by a river, of whose banks  
On each side an Imperial City stood,  
With Towers and Temples proudly elevate  
On seven small Hills, with Palaces adorn'd,  
Porches and Theatres, Baths, Aqueducts,  
Statues and Trophees, and Triumphal Arcs,  
Gardens and Groves presented to his eyes,  
Above the highth of Mountains interpos'd" (4.29-39).

His inclusion of specific rivers, mountains, hills, valleys indicates not only familiarity with locations but the landscape. Accurately referencing the lengths, heights, and depths of these areas would be difficult under normal circumstances, but the fact that Milton was blind by this point should show that he relied heavily on his knowledge of maps to present the world in both *Paradise Lost* and *Paradise Regained*.

In addition to his interest in terrestrial geography, Milton indicates that he is thinking in cartographic terms with the cosmos. For just as the earth is described as if from a geographical map, the stars are mentioned as if from an astronomical calendar. In book ten, the explanation of the earth's axial tilt is given and referenced to the signs of the zodiac. Here Milton explains that in the Earth's newly tilted position, these constellations affect how the weather and climate works in specific regions.

These changes in the Heavens, though slow, produced

Like change on sea and land." (10.692-693)

The rest of this lengthy passage goes on to say that areas such as Norumbega would have cold winds come "from the north" (695) when some stellar signs were in the sky but that "adverse blast upturns them from the south" (701) when the other signs were present. Milton's references to how the presence of certain stars correspond to weather patterns at times of the year are close to what one might find if looking at a calendar with astronomical charts.<sup>2</sup>

---

<sup>2</sup> For further study into Milton's geographic details, see John Gillies' "Space and Place in *Paradise Lost*."

But more intriguing than just the stars is that Milton designs the larger segments of the universe (Heaven, Hell, and Chaos) of *Paradise Lost* cosmographically.<sup>3</sup> When Satan and his rebels are cast out of Heaven, they are cast *down*. “Nine days they fell” (6.871). And Satan calls his destination in Hell “the bottom of this gulf” (1.329). This gulf is at the opposite end of the universe as Heaven, and it is

As far removed from God and light of Heaven

As from the center thrice to the utmost pole (1.73-74).

For these areas to be “removed,” one at the top and one at the bottom, and for this distance between them to be measurable by a center and poles, Milton must have had an overall design in mind. This design is like that of a map. Since Satan goes *down* and also reaches a *bottom*, Milton visualizes his universe with a bottom, middle, and top. These directions are consistently present throughout the epic. For instance, as Satan leaves Hell he begins “Ascending by degrees magnificent” (3.502) until he has gone “Up to the wall of Heaven” (3.503). Milton specifies these directions in terms of a compass when he describes part of heaven as the “quarters of the north” (5.689), further indicating his map design.

A number of people have noted that Milton’s descriptions of the universe in *Paradise Lost* and have attempted to draw this universe. Since the nineteenth century, several cosmographers attempted to chart the shape and layout of Milton’s universe. While *Paradise* has been illustrated since 1688,<sup>4</sup> the first cosmograph of *Paradise Lost*

---

<sup>3</sup> I capitalize Heaven, Hell and Chaos in line with the general practice of capitalizing specific locations.

<sup>4</sup> For a look at what the earliest illustrations focused on, see the British Library’s “First Illustrated Edition of *Paradise Lost*.”

appears in David Masson's second volume of *The Poetical Works of John Milton* (1874). But Masson seems to have been dissatisfied with his drawing, for a few years later, in volume six of *The Life of John Milton* (1880), Masson asserted that Milton's epic was in need of cosmographical visualization (532). His perspective was that epics like Milton's and Dante's should have some kind of map, even if a crude one, in order to help guide readers. Since Masson's time, a number of cosmographs have been supplied, but differences in each has caused more confusion than clarification about Milton's design. William Warren's 1915 comparison of cosmographs of *Paradise Lost* acknowledges this "striking lack of agreement" among maps (13), but Warren does not indicate which elements in the maps can be found in *Paradise Lost* and which are interpretive guesses. Close to a century after Warren, Gabor Ittzes (2012) also concludes that the existing illustrations are flawed. Ittzes's explanation is that Milton's descriptions in *Paradise Lost* are imprecise and therefore lead to imprecise illustrations. But my comparative analysis offers another explanation. Milton's descriptions are precise enough to be mapped, but the cosmographical attempts thus far have been skewed by geocentrism. By centering the design of Milton's universe on God instead of on the earth, a better map can be made that best illustrates the shape of Milton's universe in *Paradise Lost*.

Milton's familiarity with maps and descriptions of geographical areas in *Paradise Lost* are key to understanding how a blind man might choose to map his universe.<sup>5</sup> Milton designs his universe in *Paradise Lost* in much the same way as the Earth: by setting forth

---

<sup>5</sup> Thompson claims that Milton, despite being blind, uses an expert background in both ancient and contemporary geography to combine a poetic and geographically accurate world in *Paradise Lost*. For further information about Milton's relationship with maps, see Morgan Ng, "Milton's Maps."

each location's relation to other locations, seldom citing distances. And though anyone who reads the text can find the same information, attempts to plot the information in a map have been partly inaccurate because they insist on placing the Earth at the center of the universe. Yet in book nine, Milton describes his universe as completely centered on God.

. . . As God in Heaven

Is center, yet extends to all. (9.107-108)

Despite this evidence, attempts to map Milton's universe usually result in Earth being at the center. For this reason, I provide a new model of Milton's universe, but first I will outline the agreed-upon spatial locations, highlight common difficulties in mapping, then present examples in five maps to exemplify organizational discrepancies that stem from a geocentric bias, and lastly provide a new map that successfully visualizes Milton's universe in terms of a focus that has not yet been suggested: Deocentric, or God-centered.

The first challenge with depicting a map of Milton's universe lies in understanding the relation between two spaces in *Paradise Lost*: the overall universe and the localized cosmos. *Universe*, as I use the term in this thesis, refers to the entirety of locations in *Paradise Lost*. It reaches from the height of Heaven to depths of Hell, with Chaos and the cosmos in between. Gabor Ittzes and others who study the cosmology in *Paradise Lost* typically use the term *universe* this way. Milton applies a different definition in *Paradise Lost* when he describes Satan's journey through chaos as

. . . a universal hubbub wild

Of stunning sounds, and voices all confused,

Borne through the hollow dark, assaults his ear

With loudest vehemence. (2.951-254)

*Universe* in colloquial speech typically refers to the realm of physical objects like the sun, moon, stars, galaxies, nebulae, etc. But despite the common understanding of the universe as physical, the word itself denotatively encompasses all of physical (planets and stars) and non-physical (Heaven and Hell) reality. *Creation* would be the traditional term used in most biblical accounts rather than *universe*, but the expression does not accurately express Milton's viewpoint of an uncreated area in *Paradise Lost*. As Mary Corcoran points out (66), in Milton's time some theologians believed that God created the universe *ex nihilo*,<sup>6</sup> but Milton clearly assumes that God created everything from pre-existing matter called Chaos. Milton first summarizes that assumption in book one by writing,

That shepherd, who first taught the chosen seed,  
In the beginning how the heavens and earth  
Rose out of chaos. (*Paradise Lost* 1. 8-10)

He later provides more details in book seven to substantiate that everything was created from the base elements that formlessly intermingle in the dark realm of chaos.

Thus God the Heaven created, thus the Earth,  
Matter unformed and void: Darkness profound  
Covered the abyss: but on the watery calm  
His brooding wings the Spirit of God outspread,

---

<sup>6</sup> The Latin term "*ex nihilo*" means "out of nothing" and almost exclusively refers to this theological debate, which questions what substance, if any, God used to create Heaven and Earth.

And vital virtue infused, and vital warmth  
Throughout the fluid mass; but downward purged  
The black tartareous cold infernal dregs,  
Adverse to life. (7. 232-239)

For Milton, this chaotic realm in *Paradise Lost* exists as a dimension of raw base elements (earth, water, wind, and fire) from which God creates Heaven, Hell, and the cosmos. God takes a lump out of chaos to fashion the earth, gives it a shape, separates the elements, and “purged” it of the cold darkness. Since Milton’s character of God, however, does not *create* Chaos but uses chaos to create, the location cannot be accurately included in the term *creation*.

The localized “cosmos,” as I use the term in this paper, refers primarily to the solar system, but can also apply to the totality of planets and stars perceivable from Earth. The term *cosmos* was probably not widely used during Milton’s time, since the *OED* records its earliest written usage in 1650. David Masson, Milton’s nineteenth-century biographer and critic and also a voice in this discussion, applies the word *cosmos* to *Paradise Lost* and defines it as an area that encompasses the “orbs and galaxies which man’s vision can reach by utmost power of telescope” (22). The most common argument regarding Milton’s cosmos is the order in which he places the planets. In “Milton’s Textbook of Astronomy” (1917), Allan H. Gilbert presents a summary of the well-known argumen that Milton’s cosmos represents a Ptolemaic (i.e., geocentric) model rather than



a Copernican (i.e., heliocentric) one (299).<sup>7</sup> Later, in 1937, McColley also highlighted the scholarly debate about Milton's planetary lineup within this cosmos, mentioning that many critics claim that Milton takes a classical approach by proposing a geocentric solar system, i.e., one that followed the old model of the sun, moon, planets, and stars orbiting the earth, while others suggest that Milton's scientific background influenced him to design a heliocentric cosmos. Catherine Gimelli Martin (2012) remarks on this debate and mentions that the cosmographical details in *Paradise Lost* "strongly suggest" a geocentric setup. Indeed, the positioning of the sun and earth does make up some scholarship of Milton's cosmos, and I cannot overstate the importance of the geocentric cosmos debate's influence on maps of the universe of *Paradise Lost*. As the figures below show, the idea of geocentrism does not end with the cosmos. I do find it likely that Milton places the Earth in the center of his own solar system, but I must disagree that Milton's Earth also centers the entire universe. Still, a number of maps seek to place a geocentric cosmos within a geocentric universe—that is, they place Earth in the center of the solar system as well as placing it as the middle point between Heaven and Hell. This universal geocentric stance seems to ignore a number of key statements in the text and thereby puts the Earth in a position that Milton did not intend.

There are several aspects of Milton's universe on which all scholars would appear to agree. One is that each realm in *Paradise Lost* exists in the same realm of existence as a semi-physical location that can be reached from any other point. This physicality is the

---

<sup>7</sup> See Edward Grant's "Scientific Imagination in the Middle Ages" for a background into the origin of heliocentric arguments, and and Gilbert's "Milton and Galileo" for information on this debate in Milton studies.

reason that the solar system had to be protected from Chaos by a *physical* barrier. As Ittzes explains, “Heaven, Hell, and the cosmos are essentially independent cosmological regions. The space between them is not vacuous but occupied by Chaos” (37). Not only do these areas exist as separated and independent regions, but they exist interdependently in location. The spatial order of Milton’s cosmology begins at the top with Heaven. Milton scholar Walter Clyde Curry (1887–1967), whose map is included as figure 8 in this study, remarks that unlike Earth, the “Heaven of Heavens has no sky” (Curry 146). No sky (in the traditional sense) exists in Heaven because nothing can exist *above* it. Therefore, maps of *Paradise Lost* indicate Heaven in the topmost region. Heaven is located above all, consequently “everything is down from there” (Ittzes 51). Cosmographers agree to show Hell and the cosmos somewhere below Heaven. Hell specifically appears “at the opposite end of the universe [and] at the bottom of the Miltonic universe not only morally but also spatially” (Ittzes 35). Milton also specifies in the first book of *Paradise Lost* that Heaven is three times farther away from Hell as it is from Earth, stipulating that Hell is “As far removed from God and light of Heaven / As from the center thrice to the utmost pole” (1.71-74).<sup>8</sup> Masson accordingly claims that this “distance from Hell-gate to Heaven-gate is exactly three semidiameters” (23) of the cosmos. While the cosmos is an enclosed and separate system, it hangs from Heaven “linked in a golden chain” (2.1005), and is later tied to Hell (2.1028-31, 10.299-305). Masson’s interpretive position is that Earth and Hell stretch this three-fold distance away

---

<sup>8</sup> If geocentrism has also affected this interpretation, then this quote may be referring to God as the center of the universe rather than of Earth. If so, the position could be valid since it would be hard to measure a distance by the earth when it had not been formed by this point. Unfortunately, such conjecture is beyond the scope of this paper.

from Heaven but not from each other. And though Earth is eventually connected to Heaven by a chain and Hell by a causeway, the three locations do not form a straight line. As I will demonstrate, such an inaccurate straight line results from imagining a geocentric universe.

While placements of planets within Milton's cosmos have been debated, but the structural layout in Milton's overall universe remains somewhat of a mystery. Michael Murrin and Ittzes both agree that the locations of Hell, Chaos, Heaven, and the cosmos figure in *Paradise Lost*, but they do not agree on *where* these locations appear in relation to one other. Yet many events in the epic suggest that Milton presents the locations where characters are *in relation to where have come from*: Satan traverses up from Hell to Chaos; Uriel travels down from heaven through the sun to meet Gabriel on Earth; the Son leaves Heaven, enters Chaos, and forms the cosmos. Each of these details provides a location, implies directions for reaching it, and are no doubt intentional. Satan makes at least one journey to each area in *Paradise Lost*, and thus his travel accounts for the majority of cosmographical descriptions of the Miltonic universe. The details Milton provides to describe Uriel's can be used to map the localized cosmos, but they do not help map the larger universe. Uriel's travel is logged in book four when he goes to warn Gabriel of Satan's whereabouts, and while his passage is limited to the solar system, it does demonstrate how Milton likens his own directions to those of a map:

Thither came Uriel, gliding through the even  
On a sun-beam, swift as a shooting star  
In autumn thwarts the night, when vapors fired  
Impress the air, and shows the mariner

From what point of his compass to beware

Impetuous winds: He thus began in haste. (533-538)

The passage mentions that the night sky is like a map that provides a compass that a seaman would navigate by. The comparison of the shooting star to Uriel is also at least a nod to nighttime navigation, although of course a sailor could not navigate by a meteorite. Milton was doubtless aware that angels in the Bible are often referred to as stars (Job 38:7, Isaiah 14:13, Revelation 1:20, 9:1, 12:4) and may well have used this allusion to strike a parallel between star guides and angelic guides. Just as stars in the sky guide a mariner, this star (Uriel) guides readers of *Paradise Lost*. And though Uriel himself only appears for a short while, most travel in *Paradise Lost* is by angelic beings like Uriel, Gabriel, Raphael, Michael, and Satan—the fallen *star* of the morning in 5.708.<sup>9</sup> Indeed, Milton seems to favor using angels to provide cosmographic context, for his account of the Son's creation of the cosmos focuses more so on the character than the location with the statement that,

. . . Heaven opened wide

Her ever-during gates, harmonious sound

On golden hinges moving, to let forth

The King of Glory, in his powerful Word

And Spirit, coming to create new worlds.

On heavenly ground they stood; and from the shore

They viewed the vast immeasurable abyss. (7.205-211)

---

<sup>9</sup> This title that Milton ascribes to Satan is derived from Isaiah 14:12.

Granted, this passage does show heaven to be above the immeasurable abyss of chaos, but Milton chooses to place more emphasis on describing the character's grandeur. It becomes necessary therefore to focus primarily on Satan's journeys, which I do below, because they demonstrate in most detail the relationship between all the larger cosmographical regions. Other episodes with Gabriel and Michael are helpful in mapping smaller segments of Milton's universe but not in mapping the interconnectedness of the larger areas.

As Milton scholar Sherry Zivley argues, "Milton's interest in and knowledge of geography and astronomy was extensive—too extensive for him to have been unaware of the implications of the details he provides" (130). Nevertheless, these geographical and cosmographical details that Milton supplies in his directional narratives are exactly the ones obscured by many maps of *Paradise Lost*. One reason that these maps obscure details is from seemingly contradictory evidence rather than from any lack of evidence. For example, when the text specifies in one place that God centers Heaven (7.228-232) and later claims that He centers everything (9.108), Ittzes takes these two facts to suggest that Milton's universe is a paradox that cannot be accurately portrayed in human terms.<sup>10</sup> Ittzes also concludes that Milton's account of Satan's nine day fall to Hell in *Paradise Lost* 1.50-51 and Raphael's half day's journey to Earth recounted in 8.110-114 describe the size of the universe with metaphors that make it "impossible to picture with any precision and consistency" (51). But such a view of Milton's literary style does not

---

<sup>10</sup> Even outside of *Paradise Lost*, there is a similar paradox of reference in the statement, commonly attributed to Augustine, that "God is a circle whose center is everywhere and whose circumference is nowhere" (Field 125).

appear to be accurate. Indeed, in an article detailing Milton's knowledge of astronomy, Malabika Sarkar claims that the details of Satan's journey represent "one of the finest examples of the precision and vividness of Milton's astronomical imaginations" (417). Indeed, Milton's precision with terrestrial geography makes it unlikely that he would be imprecise with heavenly. For instance, for over twenty lines in book 11 Milton names and described cities and countries such as, "The empire of Negus to his utmost port / Ercoco, and the less maritime kings / Mombaza, and Quiloa, and Melind, / And Sofala, thought Ophir, to the realm / Of Congo, and Angola farthest south" (11.397-401). These short yet detailed descriptions are far too precise for Milton to then describe the distance between Heaven and Hell with mere metaphors. The supposed contradictions can be reconciled and are not necessarily proof of an unmappable universe.

As a cartophile, Milton possessed an intimate knowledge not only of maps but of map making. Itzes' claim, then, that unspecified size and distance of realms pose problems in mapping *Paradise Lost* should be examined more closely. Milton likely understood that size and distance can both be compromised depending on the needs of the map. Flat maps of a spherical earth will distort and reportion corners, thereby affecting the size of countries and the distance between them. Gerardus Mercator's maps in the sixteenth century, an example of which appears in figure 1 below, popularized this distorting practice that still influences maps today. Just as flat maps sacrifice accurate sizes of locations from a globe in order to allow for a better overview of the whole interrelation of these locations, a map of Milton's cosmos that sacrifices the scale of infinite Chaos to finite non-Chaos still allows for an accurate representation of all locations in relation to each other.

Figure 1. *Mercator's 1586 map of Europe.*



Another point to be considered in the face of Ittzes's claim is that cosmographs before and after Milton's time (see figures 2 and 3) often misrepresent the actual sizes of cosmographical units and the distances between them in order to show their relationship to each other. Milton's descriptions are as accurate as those of any map if judged by the same standards. For instance, any recent map that only includes the solar system must enlarge the planets and distort their relative distances. Otherwise, the sun drawn at the size of a period would require about twelve inches of paper<sup>11</sup> to show its distance from the earth, which itself would have to be drawn too infinitesimally small to be seen. I

---

<sup>11</sup> I.e., as much space as is necessary to represent 107 periods.



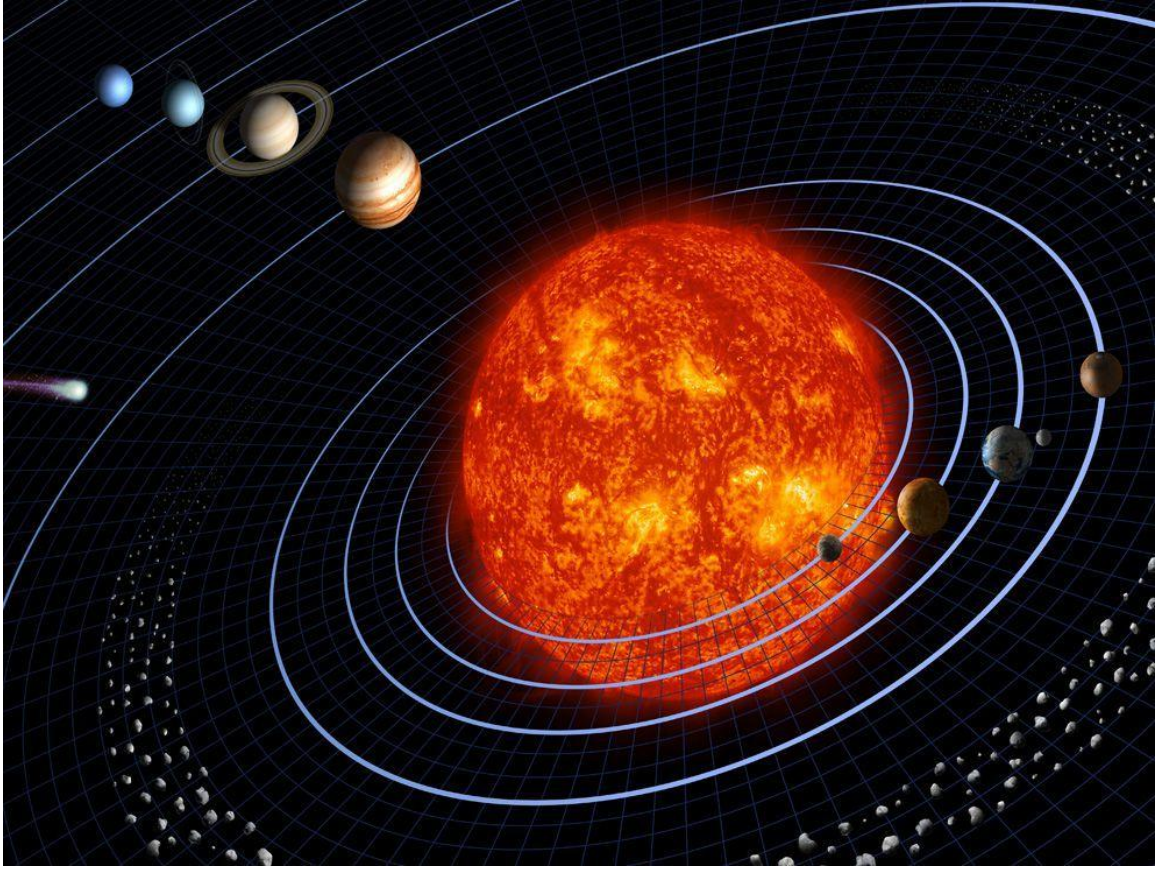
include below in figure 3 such a distorted map of the solar system. I argue that Milton's universe should be conceptualized by analyzing how separate locations interact with each other rather than by any measurement of scale.

Figure 2. *Thirteenth century map of the universe* (courtesy of Luminarium's Encyclopedia Project).





Figure 3. *National Geographic's map of the Solar system with disproportioned and misplaced planets.*



The following drawings show a similar arrangement of where some artists believe that prime cosmographical entities in *Paradise Lost* are located in relation to each other. Figure 4 is from Stephen Gurteen's *The Epic of the Fall of Man: A Comparative Study of Caedmon, Dante and Milton*. Figure 5, "Scheme of *Paradise Lost*," is from Thomas Orchard's book, *Milton's Astronomy: The Astronomy of Paradise Lost*. There is a noticeable geocentric slant in both figures, as the images locate Earth at both the center of a contained cosmos (solar system) and at the center of the larger universe. With this geocentric arrangement, characters in Hell and Heaven would primarily interact with Earth or go completely out of the way to travel somewhere else. Still, Hell appears at the

lowest point in the universe and Heaven at the highest. Chaos is located between Heaven and Hell and surrounds the cosmos. The placement of these locations is understandable, since Milton also specifies that God cast Satan “down” to Hell (1.46), and that from there Satan had to “ascend” to get back (2.56). Furthermore, these drawings even account for the text’s mention of the solar system within a shell that connects to Heaven by a golden chain. The artists also display Heaven above all else in the image. Individually, these separate locations in maps would appear to be accurate, but when the maps are further compared to the text, the inaccuracies emerge. For despite their consistency of placement in relation to Heaven, the Earth appears out of place in relative position to Chaos and Hell. Likewise, the location of Chaos corresponds with Hell but not with Heaven.

In both figures, the geocentered cosmos sits evenly in the midst of Chaos and perfectly between Heaven and Hell at an absolute center of the universe. Gurteen intentionally designs a geocentric rendering, because it allows “a more easy descent to hell of the human race” (143). In Milton’s text, however, Heaven holds an alternate place. It appears immediately where Chaos ceases, but these images misconstrue the respective location of the cosmos. The first two books of *Paradise Lost* establish that Satan begins in Hell and then “ascends” through Chaos to find Earth. While still ascending, he reaches Heaven *first* and then afterward locates Earth. As soon as Satan passes through Chaos, we are told,

But now at last the sacred influence  
Of light appears, and from the walls of Heaven  
Shoots far into the bosom of dim night  
A glimmering dawn. Here nature first begins

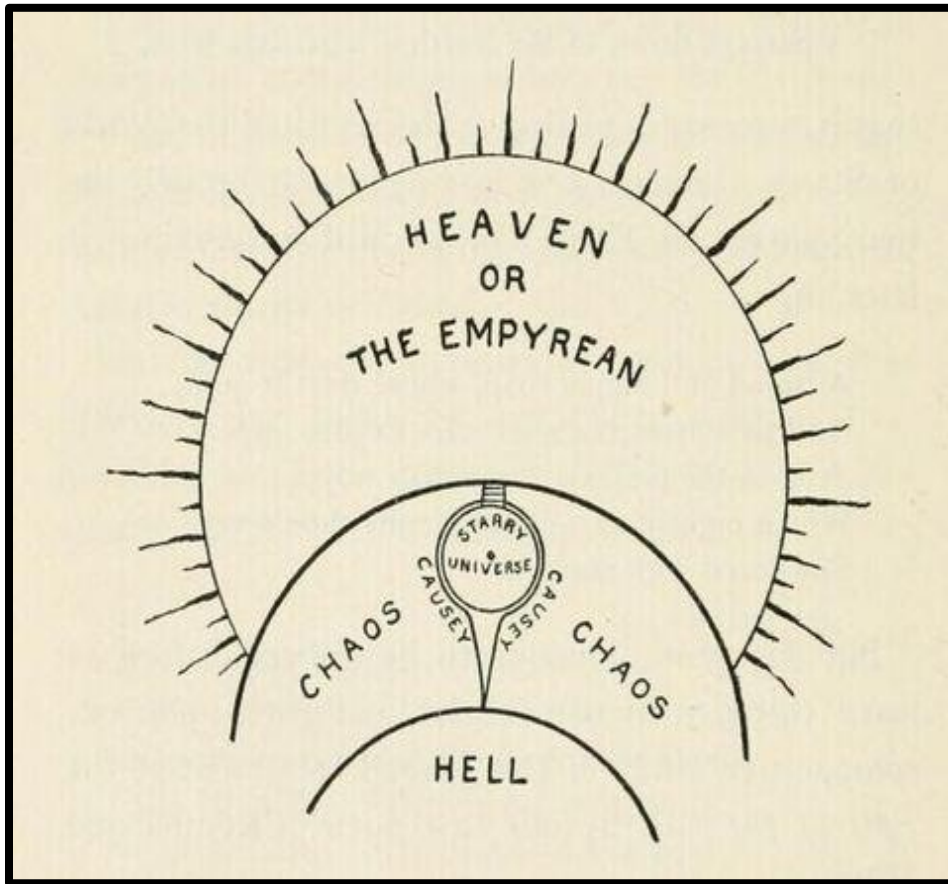
Her farthest verge, and Chaos to retire. (2. 1034-1038)

From Satan's perspective, the aspect of creation that "first begins" borders Chaos with *Heaven*, not the Earth. Satan begins his upward flight from the innermost Hell, and his Heavenly destination shows that Hell does not lie *directly* below Earth. One or the other must be off-centered, for otherwise he would have come across Earth first. The "causey" of figure 4 seems to ignore this spatial information and tracks Satan's flight through the cosmos first.<sup>12</sup> Apparently, with this map, he passes right through the cosmos and reaches Heaven before realizing where he is. However, the long, looping "causeway" of Orchard's cosmograph (figure 5) at least lays out the path with the text in mind and acknowledges that Satan reaches Heaven first. Unfortunately, Orchard includes no explanation as to why the path follows such an unlikely arc that is not indicated in the epic. Certainly, Satan travels in an "oblique way" (3.564) once he regains his bearings and enters the solar system, but his direction through Chaos is itself chaotic. He travels "half on foot, / Half flying" and "swims, or sinks, or wades, or creeps, or flies" as best as he can (2.941-950). The assumption in these pictures seems to be that the Earth must rest in the middle of the universe. Such a positioning hinders Satan's path and requires that Hell and Heaven be diametrically opposed with earth between. This strange geocentric presupposition of the cosmographer explains why the pathway of Satan takes on the bizarre direction shown, but no textual passage backs such a direction.

---

<sup>12</sup> Technically, Sin and Death build the causey later, but since their direction was "following the track / Of Satan to the self-same place where he / First lighted from his wing" (10.314-16), they fit the role of construction workers following Satan's blueprints.

Figure 4. *Gurteen's drawing of Milton's universe in Paradise Lost.*<sup>13</sup>



<sup>13</sup> I chose not to include some maps of Milton's universe, such as the David Masson and Homer Sprague's cosmographs, in order to avoid redundancies, since those maps are similar in most ways to Gurteen. See Warren for a larger corpus of maps.

Figure 5. Orchard's Visual Aid for *Paradise Lost*.

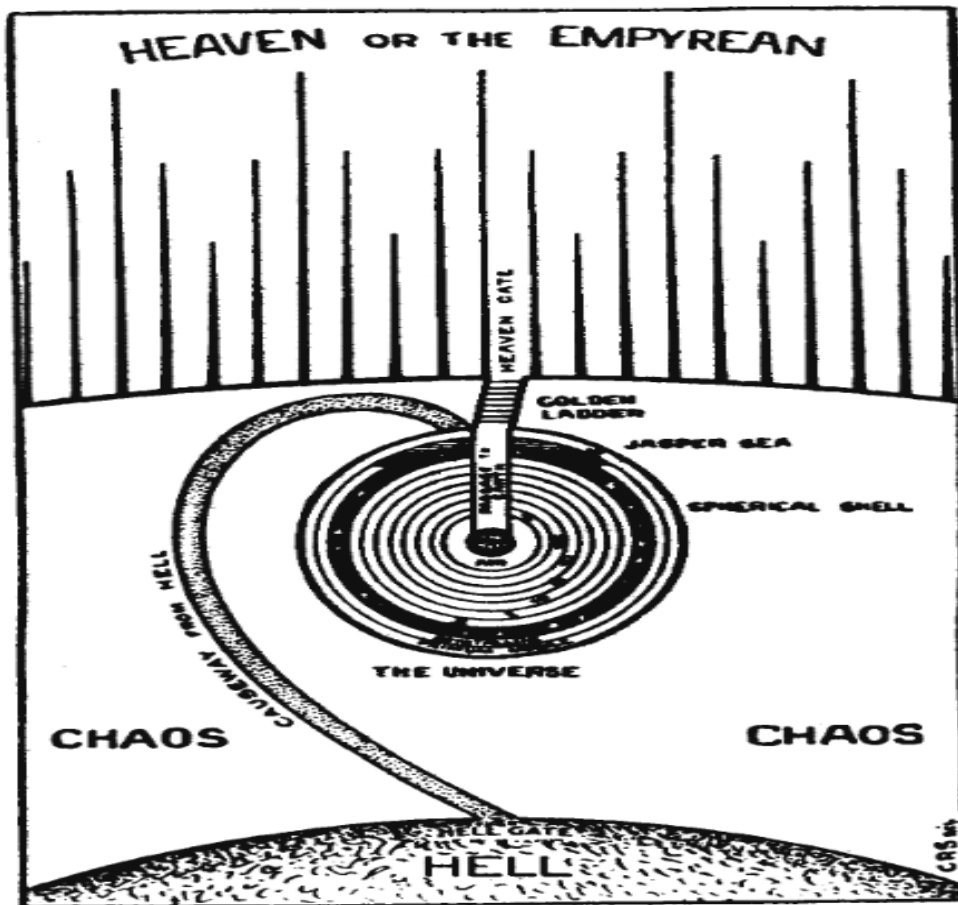


Figure 6 below takes a slightly different look at the individual locations in *Paradise Lost*, though it too falls into geocentric design. I must note that its source remains a mystery to me. While I have found a few websites that display this image,<sup>14</sup> none provides any clue as to the artist. In this figure, the encircling areas of Chaos now horizontally center the image, which is understandable given its immeasurableness. The Earth, however, still sits *vertically* between Heaven and Hell despite the addition of the

<sup>14</sup> I.e., Cultist of Vertigo (<http://cultistofvertigo.blogspot.com/2015/05/doom-commedia-cosmology.html>), Reddit ([https://www.reddit.com/r/bakker/comments/42op74/miltons\\_cosmos\\_reminds\\_me\\_of\\_the\\_dichotomy/?ref=readnext](https://www.reddit.com/r/bakker/comments/42op74/miltons_cosmos_reminds_me_of_the_dichotomy/?ref=readnext)) or Dartmouth (<http://www.dartmouth.edu/~matc/Chaos/Heaven.gif>). None of these sites provides further source information..

pavilion. In other words, the visual alteration of Chaos affects the *distance* between Heaven, Earth, and Hell, but their respective positions remain unchanged. Earth still steadfastly interferes with a direct flight upward from Hell to Heaven. Again, the influence of a geocentric cosmos affects the mapping of the universe. Had Earth been more to the right or left, or had the pavilion been more to the right or left, the overall visualization might be more accurate.

As the image shows, even a unilaterally geocentric model, that is, any model that uses a straight line to place Heaven, Earth, and Hell, forces Heaven and Hell into opposing positions and therefore inaccurate ones. As a result, this particular drawing's placement creates a new problem with its position of Hell and with its shape. The first two figures depict Hell spread out at the absolute bottom of the universe, which works fine for the most part. But figure 6 indicates that Chaos completely surrounds Hell. In this image, Hell exists within a contained and centered sphere, not unlike the one housing the cosmos above it. With such a location, Satan could not have known which way to fly.<sup>15</sup> Any direction would be upward from the center of an enclosed sphere. By this map, he would have to know intuitively which direction is up in order to reach the pavilion directly above Hell. Yet the text specifies that he reaches Heaven first after the pavilion, whereas figure 6 obstructs that pathway with the cosmos. As a result, this layout forces Satan to suddenly stray off course and reach Heaven instead of Earth. It is unlikely that

---

<sup>15</sup> The familiar quotation by Satan, "Which way I fly is Hell; myself am Hell; / And, in the lowest deep, a lower deep" (4.75-76) deals with his *emotional* state and should not be understood as relative locations of Hell, Chaos, and Earth.

he would be able to go straight up in the correct direction on his own and then get lost, especially after guidance from the ruler of Chaos (2.1007-1009).

In figure 6, the spherical enclosure depicted around Hell creates a conflict with the textual information Milton provides. This image of an enclosed sphere shows Hell with no objective up, down, left, or right. This error was not an issue in figures 1 and 2, because Hell takes up the entirety of the bottom plane in those depictions. The text specifies that Satan was “Thr[own] forth . . . on the left side” of Heaven (2.275). God threw him in this direction because he also placed Hell to the left. “And now in little space / The confines met of empyrean Heaven, / And of this World; and, on the left hand, Hell” (10.320-322). The first two maps show Hell wide enough to arguably have a left side, but figure 6 destroys any sense of direction. This spatial confusion could be resolved by depicting Hell on the left side, but little accuracy is present with the centered and contained Hell of figure 6, which has no left side to fall toward or upside to exit from.

Figure 6. *Anonymous Map of Milton's Universe.*

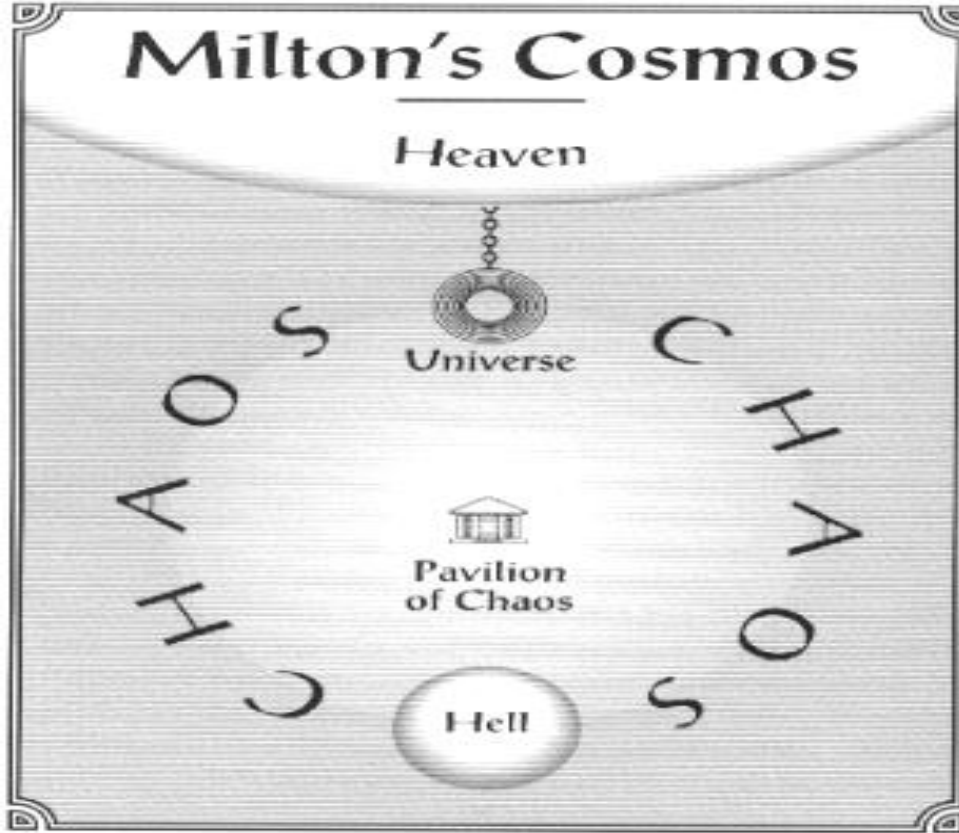


Figure 7 resolves some of the aforementioned placement problems by shifting focal points, though it still places the Earth at the center. This image (also qtd. in Ittzes [43]) originates in John Himes's 1898 edition of *Paradise Lost* and is listed with other maps in William Warren's *The Universe as Pictured in Milton's Paradise Lost*.

Heretofore in my presentation of images, the maps have all viewed the universe from a specific frontal perspective, which is shown on this figure as the "north-left," a location I will further discuss below. Warren's figure opts to view the side of Milton's universe, and Hell now appears on the left from this perspective. As a result, Heaven and Hell's positions match Milton's lateral description. But the Earth's position still interferes with



the overall accuracy of interrelated positions, and Chaos is mistakenly ordered by layers of the elements, as I will also further discuss below.

Warren's image most accurately portrays Hell's relative relationship to Heaven. If Satan theoretically ascends from where Warren places Hell, then almost any angle would have him reach Heaven first. If he travels straight upward, then he eventually would level off and find Heaven, the highest point in Milton's universe. The same result comes from any path for which the angle is greater than 40 degrees, which would have him just miss the cosmos and arrive at Heaven. The artist initially draws Satan's journey upwards closer to 70 degrees but then flattens the line. As a result, this pathway directly meets the cosmos, meaning that Satan must circumnavigate it to arrive first in Heaven. Geocentrism on the part of cosmographers clearly restricts their accuracy in mapping *Paradise Lost*. The cosmographer's diagram has earth in the center even though the artist could easily fix this shortcoming by swapping Heaven and Earth's horizontal positions. Thus, Heaven would remain at the top, but it would be centered between Hell on the left and Earth on the right.

Figure 7 also creates problems of its own. Chaos in this image fills the void between Hell, Heaven, and the cosmos, as Milton designed, but this figure imposes a specious structure on Chaos. The substance of this realm indeed consists of the four elements shown, but the idea of "Chaos" means that they all coexist without any order in a formless conglomeration. Yet Warren's map reveals the path of Satan's journey as if through only the elements of earth and water. Milton describes how Satan crosses Chaos "With head, hands, wings, or feet, pursues his way, / And swims, or sinks, or wades, or creeps, or flies" (2.949-950), which description should dispel any idea of ordered layers

of elements. He even describes the area at one point as “this windy sea of land” (3.440), which conflates three of the four elements. Such phrasing presents Satan’s travel as a disordered path through a mix of the four elements. But the map in figure 7 shows a structured layout of Chaos that paradoxically indicates order within. The image shows Satan’s path as only between the levels of water and earth until he reaches the pavilion, but Milton’s text provides an alternate account.

Figure 7. *John Himes’s 1898 Map.*

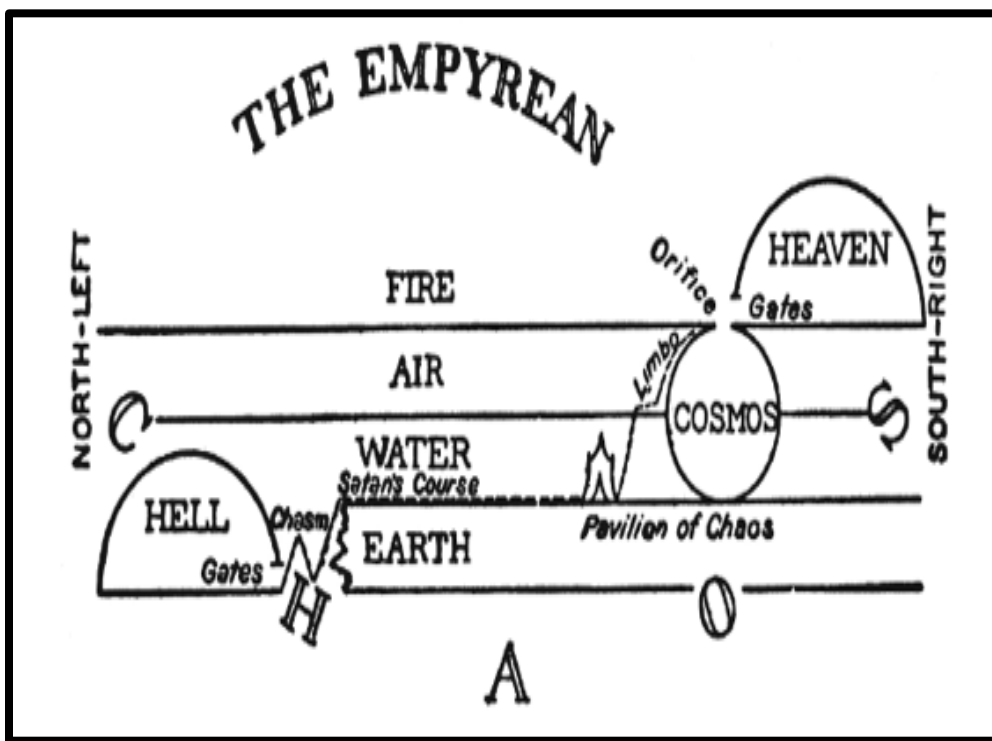
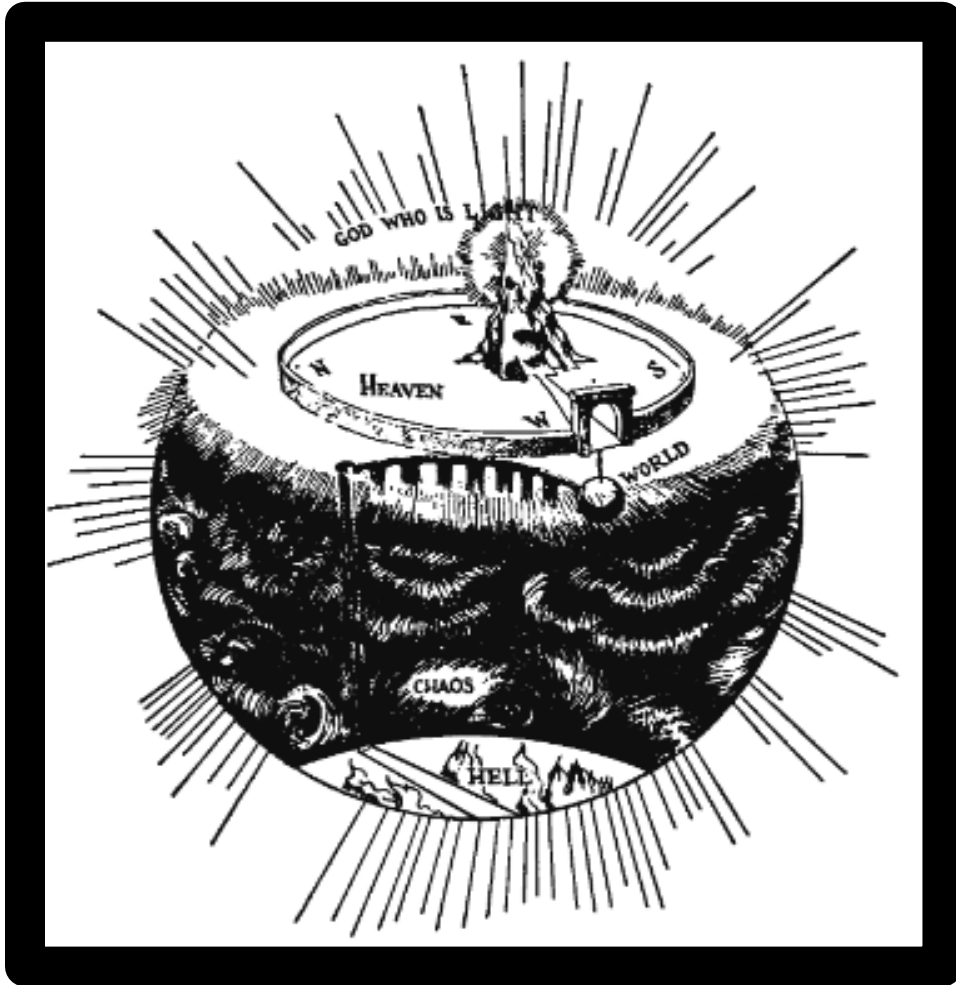


Figure 8 below by Walter Clyde Curry is comparatively more accurate than the previous figures, but it too is unreliable in some respects. It does appear to be the least geocentric layout, for Curry’s aim was to create “A diagram suggesting the relationship between God . . . and total space” (156). The region of Chaos remains disordered and thus appropriately chaotic in this drawing, correcting the major flaw in figure 7. Hell continues to lie directly opposite Heaven, but in this case Earth hangs to the side of

Heaven's western gate. With this map's layout, Satan would foreseeably reach Heaven's periphery first and then have to follow its perimeter to find the cosmos. However, as Schibanoff and Hageman suggest, "the details of that diagram are debatable" (75). Figure 8 makes part of the same mistake as figure 6 in using the semi-spherical shape of Hell, which raises the question of how Satan knows in which direction to travel. Unlike figure 6, figure 8 does allow an orientation for upward travel, and this decision solves half of the problem. However, the round bottom shape of Hell in figure 8 does not allow for Satan to come from a left side, since a circle has no sides. The map does attempt to address the subjectivity of a left side of Hell by showing a compass around Heaven. This definitive position establishes an objective perspective as to which direction is which. Such details allow for a potential left side if compared to the directions shown at the base of Heaven, though the diagram still falls short in one regard. Satan begins in the *innermost layer* of Hell and passes nine gates to leave (2.629-646). He even verbalizes his starting point as "the lowest bottom" (2.882). Hell is at the bottom of the Miltonic universe, and the layer Satan references is the lowest bottom of that. The lowest and innermost level of Hell in this bowl shape must rest at the bottom. This position places the innermost layer of Hell directly below Heaven. "Left" could arguably be almost any direction from the compass' perspective but it cannot be directly below, as is the case here.

Figure 8. *Curry's Map of Milton's Cosmos*



Each of the previous images partially succeeds in presenting a visual aid of Milton's universe, but these images are wanting some textual details. The first four images unnecessarily implement to various degrees a geocentrism that the text does not indicate, which results in a misrepresentation of Milton's universe. The fifth image succeeds by avoiding the geocentric positioning, but it places Hell geometrically opposite Heaven in a spherical shape that creates more problems than it solves.

Some early modern cosmographs in C. K. Heninger's *Cosmographical Glass* offer a few solutions to these problems. This illustrated collection of various

cosmographs before 1700 lists an image by Robert Fludd (1574-1637) that draws on Platonic and Pythagorean models to create a two-dimensional triangular concept for the universe (83). Fludd's diagram, which I have listed as figure 9, does not include Chaos or Hell, but it does provide a shape that can be modified to present Milton's universe. Heninger's collection also includes an image by Helisaeus Roslin (1545-1616), which I have listed as figure 10 and which implements triangles within larger triangles for Heaven and the cosmos, though he places Hell below both in a rectangle (126). It is possible that Milton himself could have seen or even possessed copies of these maps, but there is no way to know for sure. In any case, these maps have been helpful, since I have not seen any cosmograph of Milton's universe in a triangular shape, but the benefits of that shape are considerable, as I will demonstrate.

Figure 9. *Robert Fludd's triangular cosmos.*

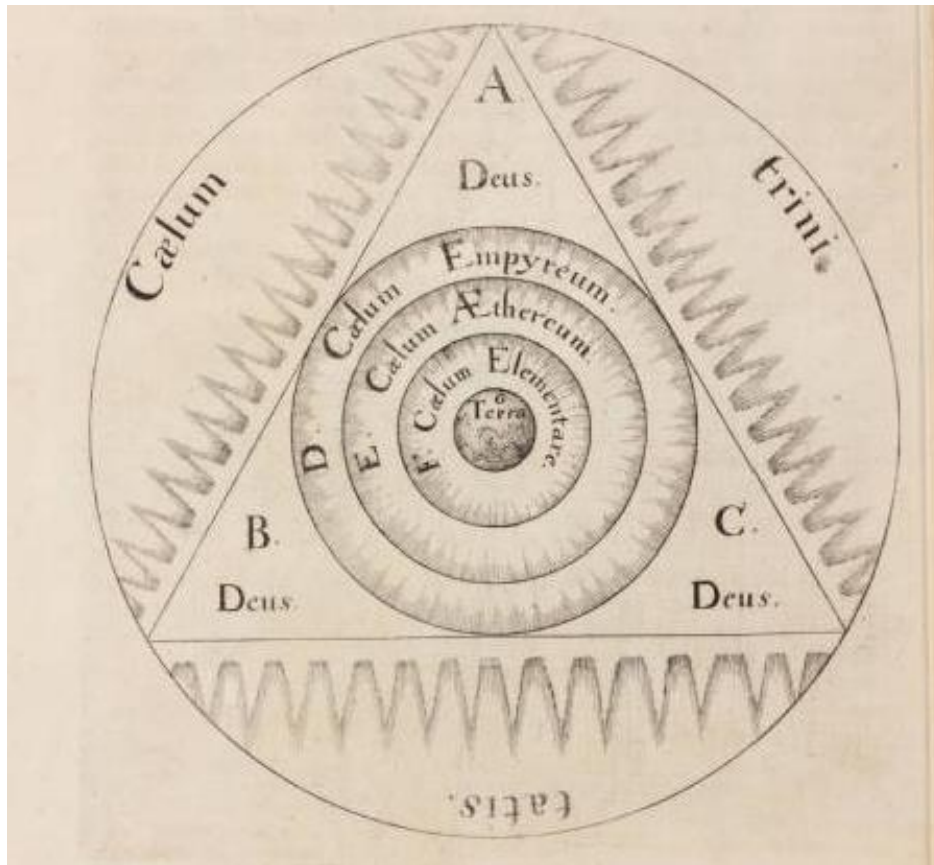
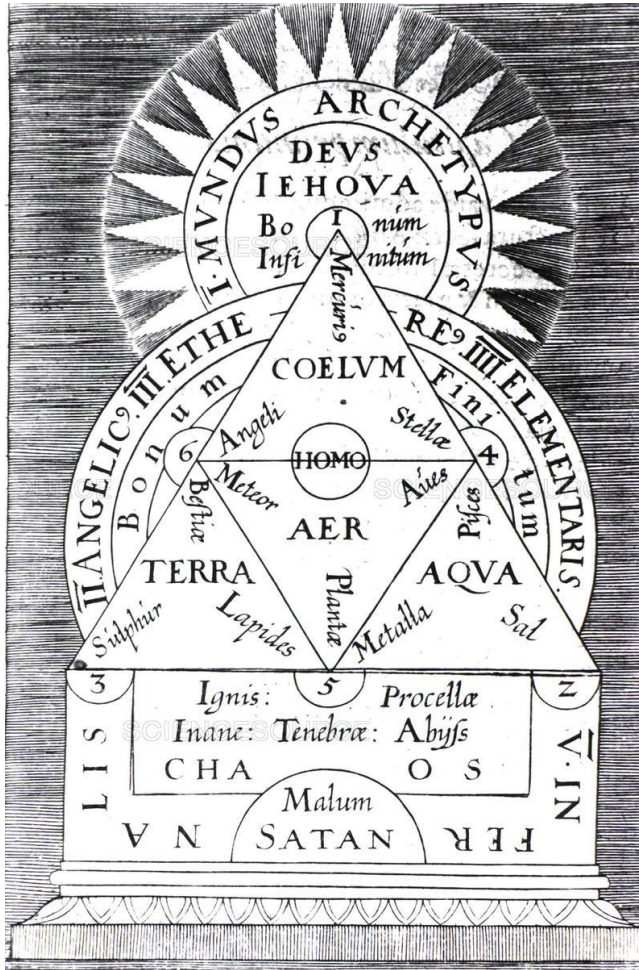


Figure 10. Roslin's triangular map of the universe.



Fludd's triangle provides a good two-dimensional template, but it needs the depth that only a three-dimensional pyramid can provide. And though my own figure 11 is a pyramid, it has not strayed from the specific areas of placement on which all critics agree. Figure 11 reflects this agreement by placing Heaven above all other areas in the universe. Hell sits far below at the bottom. The geocentric cosmos connects to Heaven by a golden chain, and Chaos fills the areas between locations. The errors demonstrated in the other images have been rectified with this figure's placement of locations. Hell's positioning comes naturally and accurately within this pyramid shape. The sphere of figure 8 by

necessity places Hell directly below Heaven for the most distance between the two; however, the shape of figure 11 allows the optimum space between Hell and Heaven, fixes Satan's path more feasibly, and arguably allows for a left side. The bottom outer corners mark the furthest distance from the top of the pyramid, though they are not directly underneath. This position in the corner also aligns with Satan's pathway. In this setup, Satan's ascent would force him to find Heaven first as he exits Chaos.

As my map shows, Milton's use of the directions north, south, east, and west are not limited to earth. In Isaiah 14:13, Lucifer's attempt to take the throne of God in heaven before the earth was formed is recorded with a compass direction. "For thou hast said in thine heart, I will ascend into heaven, I will exalt my throne above the stars of God: I will sit also upon the mount of the congregation, in the sides of the north." Milton references this terminology in book 5 when Raphael relates Satan's rebellion to Adam and describes the part of heaven under attack as the "quarters of the north" (5.689). For heaven to have the quadrants that match compass marks and to be above everything else, it seems only reasonable that these compass points exist throughout Milton's universe. Earth by this system hangs at the upper southwest corner of heaven, whereas Hell sits directly opposite along the lower northeast side. As a result, almost any type of ascent would cause Satan to reach mid Heaven before finding the cosmos. Unlike in figure 6, the corner position still touches the bottom and allows Hell to lie at the lowest level of the universe. Furthermore, this three-dimensional shape allows for Hell to lie *below and to the left of Heaven from two out of four perspective angles*. Figure 11, if seen straight on from two faces, will appear identical with Hell on the left in both. It might seem trivial to place such importance on a small detail like left and right hand sides; however, Milton has



larger themes in mind. He likely alludes to any number of biblical references that regard the right hand side with favor and the left hand side with disapproval. I have listed the thirty most pertinent of these references in the Appendix.

The pyramid shape allows for a reasonable depiction of the nine levels and gates of Hell that Satan had to escape from. By placing Hell into a corner and with this shape, the rebellious angels would have fallen through the *tops* of the pyramids. These shaped tips allow for a four-sided gate that could open naturally outward. Milton describes these details in Satan's egress though "Hell-bounds, high reaching to the horrid roof, / And thrice threefold the gates; three folds were brass, / Three iron, three of adamant rock" (2.642-646). The wording shows that Satan heads toward the "roof" to get through the nine gates. The text further confirms this shape in that Milton describes how Satan "Springs upward, like a pyramid of fire" (2.1013). This placement also practically guarantees that Satan would reach Heaven as long as he goes upward. These and the previous factors illustrate accurately now how Hell interconnects to Heaven, the cosmos, and Chaos without worry of overcomplexity or textual contradiction.

The placement of the cosmos and Heaven are worth noticing as well, since Milton designs a geocentric cosmos but not a geocentric universe. Accordingly, this map places that geocentric cosmos on the side of Heaven. The angle of the sloped wall that the cosmos rests on allows Earth to center the solar system, to still hang unhindered from the golden chain of Heaven, and to not interfere with Satan's path to Heaven. Figure 11 implements this placement because the text indicates that Milton creates a *Deocentric* universe in that God, who centers all, sits on the throne making the Father more important in *Paradise Lost* than the Son. Milton was an anti-trinitarian, therefore "Deo-

centric” (God-centered) should not be confused with “Christo-centric” (Christ-centered). Unlike a sphere or box shape from the earlier figures, figure 11 centers in Heaven at its *apex*. Geometrically, one can find the center to a sphere in the middle, but a pyramid works differently. The convex tip perfectly centers all four sides and the base. As a result, the center of a pyramid corresponds with the peak. God’s throne therefore sits at the top of the pyramid of Heaven, and Heaven sits atop the pyramid of the universe. This arrangement makes God the immediate center of everything and Heaven the center of all locations. Such a layout corresponds to the text, for as I have already noted, Milton’s “God in Heaven / Is center, yet extends to all” (9.107-108). Only a pyramid shaped universe allows God to be center, extend to all, and still be above all spatially.

Contrary to the unspecified viewpoint in figure 7, my figure 11 uses the compass of figure 8 to establish defined location directions. The compass arrangement from figure 8 better aids in textual accuracy and the perception of a left side. Earth noticeably hangs off of the western side of Heaven in these images, because visitors to Earth always enter from the east (*Paradise Lost* 4.540; 5.275; 11.118, 190). After Satan travels up to find Heaven, he travels west to reach Earth. This pyramidal shape provides further reasoning for Hell to be at the lowest and easternmost section, with Earth at the upper and westernmost section.<sup>16</sup> From Earth’s perspective, however, Satan enters “from eastern point” (3.557). This path also appears in Paradise. In Eden, “One gate there only was, and

---

<sup>16</sup> The Bible famously declares “As farre as the east is from the west, so far hath he removed our transgressions from us” (Psalm 103:12). Milton does not make this point directly, but he may have had that verse in mind when he structured his directions.

that looked east” (4.176). Thus, the western side of Heaven remains closest to an eastern facing gate on Earth.

As mentioned, figure 7 wrongly arranges the primordial elements. While it does attempt to arrange them in the traditional hierarchy<sup>17</sup> of fire, air, water, and earth, it goes too far by ordering the elements even in Chaos. The elements do influence Milton’s design on parts of *creation* but not of Chaos. Figure 11 shows the elements in creation as the text describes them. Now on a line, the elements appear heaviest to lightest. Earth sits on the bottom with water above it. Air hovers above the water, and fire soars above air. Heninger’s *Cosmographical Glass* shows that many cosmographers before Milton agreed upon this order (36), yet cosmographs of *Paradise Lost* seem to exclude this placement of these elements. They cannot appear in order throughout the realm of Chaos for the obvious reason that the region is chaotic and unordered. Hell does not allow their proper arrangement either in that it consists of fiery earth (1.670-1), fiery water (1.229), and fiery air (1.345-6).<sup>18</sup> But Earth and Heaven both represent order, with Earth connected to Heaven by the golden chain. Only in these areas can and do the elements appear in proper formation. Figure 11 elaborates on this order and shows the Earth, the epi-firmament, Heaven, and the throne of God to correspond with aspects and positions of these elements. The Earth noticeably represents the earth element, but the others require some explanation.

---

<sup>17</sup> That is, the traditional order of elements in medieval and Renaissance Europe that was popularized by Greeks such as Aristotle (Edwards 405).

<sup>18</sup> There is even an icy section in hell (2.587-603) and “many a frozen, many a fiery alp” (2.620).

The canopy of water pictured above Earth and below Heaven corresponds to the windows of Heaven that open during the Flood episode in *Paradise Lost* 11.861. The text relates that the windows of Heaven open and flood the Earth, which places the canopy of water between the two. Milton's mention of God's placing the water there earlier in book 7, which alludes to Genesis 1:6-8<sup>19</sup> and Psalm 148:4,<sup>20</sup> reads, "Again, God said, Let there be firmament / Amid the waters, and let it divide / The waters from the waters; and God made / The firmament, expanse of liquid" (7.261-264). The firmament is an outer space of the cosmos that "separates" the water into two sections. The lower level of water God transforms into the Earth, yet the water above the firmament seems to disappear from the narrative until part of it floods the Earth in book 11. Heaven corresponds to the air for a couple of reasons. First, angelic spirits (made of air) comprise Heaven rather than physical beings (made out of the Earth like Adam). The relationship between the two appears in history, religion, and linguistics. The word "spirit" literally means "air" and as a root appears in such compounds as *perspire*, *conspire*, *expire*, etc. Second, Satan describes Heaven as airy. In the council in Hell he explains,

"... we may chance

Re-enter Heaven; or else in some mild zone

Dwell, not unvisited of Heaven's fair light,

---

<sup>19</sup> "And God said, Let there be a firmament in the midst of the waters, and let it divide the waters from the waters. And God made the firmament, and divided the waters which were under the firmament from the waters which were above the firmament: and it was so. And God called the firmament Heaven. And the evening and the morning were the second day."

<sup>20</sup> Praise him, ye heavens of heavens, and ye waters that be above the heavens.

Secure, and at the brightening orient beam

Purge off this gloom: the soft delicious air,

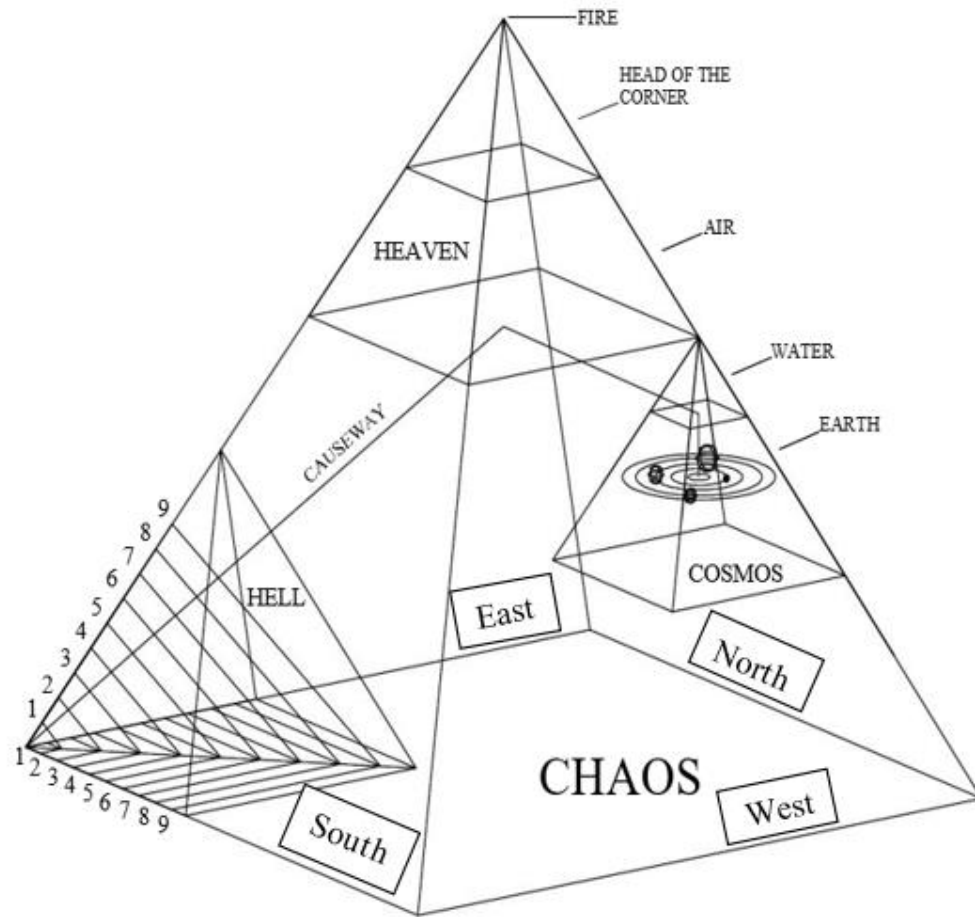
To heal the scar of these corrosive fires.” (2.396-401)

In this context, Satan describes Heaven as a place of delicious air and light without any water or Earth mentioned. The air fills all Heaven, but the light comes *down* from the throne of God. Milton describes this throne of God in a lengthy passage and details that smoke and fire emanate from it (6.723-766). Milton’s heaven has more creatures than just angels. He also mentions Cherubim and Seraphim. The angels in Milton’s universe are airy spirits as mentioned, but the unfallen cherubim support God’s fiery throne and appear to be flaming ministers. They appear in Book 6 as, “four Cherubic shapes; four faces each” who have “careering fires between” and “Over their heads a crystal firmament” which holds “a sapphire throne” (6.753-759).<sup>21</sup> Milton naturally places this fiery throne at the tip of the pyramid of Heaven. As a result, the Earth, the epi-firmament, Heaven, and the throne of God perfectly match the placements of the elements, despite how most maps either ignore or misplace these elements. Figure 11 thus provides a clear understanding as to the placement of these elements and their corresponding locations to create an accurate and helpful map of Milton’s universe.

---

<sup>21</sup> These flaming cherubim are mentioned in Ezekiel 1:5-11 and Revelation 4:6-9, and each have six wings and four faces (one of a lion, one of a calf, one of an eagle, and one of a man).

Figure 11. *My depiction of the universe of Paradise Lost.*



In conclusion, despite the amount of detailed information in Milton's text, most cosmographs of Milton's universe err by placing earth at their center. Some of them also disagree about how far away Hell is from Heaven and how vast Chaos is. These disagreements have also resulted in inconsistent mapping of *Paradise Lost* because the attention is given to rearranging anything but the Earth. I have tried to demonstrate that the root of this disagreement over location lies not on Milton's side but on misinterpretations of his placement of Earth. Certainly, Milton indicates that the Earth is at the center of the cosmos. But Milton never states or implies that Earth centers the larger universe of Heaven, Chaos, and Hell. Depictions of these misplaced geocentric

universes must therefore either ignore or erroneously manipulate information from the text. Only by focusing on the Deocentric layout of locations in *Paradise Lost* can a textually accurate and non-contradictory representation of Milton's universe be mapped. Of course, epics are encyclopedic, and a focus on only one item within the encyclopedic scope of Milton's epic can make a profound difference in our reading of it. But Milton cared about cartography, and since his directions closely follow those of a map, it is best to visualize the universe of *Paradise Lost* in the same way that he did.

## WORKS CITED

- Corcoran, Mary I. *Milton's Paradise with Reference to the Hexameral Background*. The Catholic U of America P, 1945.
- Curry, Walter Clyde. *Milton's Ontology, Cosmogony, and Physics*. U of Kentucky P, 1957.
- Field, George. "Miscellaneous Notes and Queries with Answers." *Historic Magazine and Notes and Queries: A Monthly of History, Folk-Lore, Mathematics, Literature, Art, Arcane Societies, Etc.*, vol. 7, 1890, p. 125. *HathiTrust Digital Library*, <http://hdl.handle.net/2027/umn.31951000968421m>.
- "First Illustrated Edition of *Paradise Lost*, 1688." *The British Library*, The British Library, 5 Dec. 2017, [www.bl.uk/collection-items/first-illustrated-edition-of-paradise-lost-1688](http://www.bl.uk/collection-items/first-illustrated-edition-of-paradise-lost-1688).
- Fludd, Robert. *Utriusque Cosmi Maioris Scilicet et Minoris Metaphysica, Physica atque Technica Historia*. 1617. <http://hdl.handle.net/2027/ucm.5316519988>.
- Gilbert, Allan H. "Milton and Galileo." *Studies in Philology*, vol. 19, no. 2, 1922, pp. 152–185. *JSTOR*, [www.jstor.org/stable/](http://www.jstor.org/stable/). Accessed 21 Feb. 2020.
- . "Milton's Textbook of Astronomy." *PMLA*, vol. 38, no. 2, 1923, pp. 297–307. *JSTOR*, [www.jstor.org/stable/4171823](http://www.jstor.org/stable/4171823).
- Gillies, John. "Space and Place in *Paradise Lost*." *ELH*, vol. 74 no. 1, 2007, p. 27-57. Project MUSE, doi:10.1353/elh.2007.0002.
- Grant, Edward. "Scientific Imagination in the Middle Ages." *Perspectives on Science*, vol. 12, no. 4, 2004, p. 394-423. *Project MUSE*, [muse.jhu.edu/article/176904](http://muse.jhu.edu/article/176904).



Gurteen, Stephen. *The Epic of the Fall of Man: A Comparative Study of Caedmon, Dante and Milton*. Knickerbocker Press, 1896.

Heninger, C. K. *The Cosmographical Glass: Renaissance Diagrams of the Universe*.  
Huntington Library Press, 2004.

*Holy Bible, Conteyning the Old Testament, and the New*. 1611. EEBO.

[http://gateway.proquest.com/openurl?ctx\\_ver=Z39.88-  
2003&res\\_id=xri:eebo&rft\\_id=xri:eebo:citation:38160643](http://gateway.proquest.com/openurl?ctx_ver=Z39.88-2003&res_id=xri:eebo&rft_id=xri:eebo:citation:38160643)

*Holy Bible: King James Version*. Hendrickson Publishers, 2014.

Ittzes, Gabor. "The Structure of Milton's Universe: The Shape and Unity of the World in *Paradise Lost*." *Milton through the Centuries*. Eds. Gábor Ittész and Miklós Péti. KRE & L'Harmattan, 2012, 34–55.

Lares, Jameela. *A Variorum Commentary on the Poems of John Milton: Paradise Lost, Books 11-12*. Vol. 5, part 8, ed.. P. J. Klemp, Duquesne UP, 2012.

---. "Bentley on map names." E-mail to Michael Coats, 23 Feb. 2020.

Martin, Catherine Gimelli, "Cosmos." *The Milton Encyclopedia*. Ed. Thomas N. Corns, Yale UP.

Masson, David. *The Life of John Milton: Narrated in Connexion with the Political, Ecclesiastical, and Literary History of His Time*, 6 vols. with index. Macmillan, 1859-81.

---. Introduction. *The Poetical Works of John Milton*, vol 1. Macmillan, 1874. pp. 28-33.

McColley, Grant. "The Astronomy of *Paradise Lost*." *Studies in Philology*, vol. 34, no. 2, 1937, pp. 209–247. JSTOR, [www.jstor.org/stable/4172366](http://www.jstor.org/stable/4172366).

"Medieval Cosmology and Worldview." Luminarium Encyclopedia. *Luminarium*,  
[www.luminarium.org/encyclopedia/medievalcosmology.htm](http://www.luminarium.org/encyclopedia/medievalcosmology.htm).

“Mercator Atlas of Europe.” *The British Library*, The British Library, 5 Jan. 2015,  
[www.bl.uk/collection-items/mercator-atlas-of-europe](http://www.bl.uk/collection-items/mercator-atlas-of-europe).

Milton, John. *Paradise Lost*. Edited by Christopher Ricks, Signet Classics, 1982.

"monism, n." *OED Online*, Oxford University Press, December 2019,  
[www.oed.com/view/Entry/121244](http://www.oed.com/view/Entry/121244).

Murrin, Michael. "The Language of Milton's Heaven," *Modern Philology* vol. 74, no. 4,  
May 1977, 350-365.

National Geographic Society. “Planetary Size and Distance Comparison.” *National Geographic Society*, 18 Feb. 2019,  
[www.nationalgeographic.org/activity/planetary-size-and-distance-comparison/](http://www.nationalgeographic.org/activity/planetary-size-and-distance-comparison/).

Ng, Morgan. “Milton’s Maps.” *Word & Image*, 29:4, 2013, 428-442. DOI:  
10.1080/02666286.2013.798092.

Orchard, Thomas N. *Milton’s Astronomy: The Astronomy of Paradise Lost*. 1913. Reprint  
Norwood Press, 1977.

Sarkar, Malabika. “Satan’s Astronomical Journey.” *Notes and Queries*, vol. 26, no. 5,  
1979, Pages 417–422. <https://doi.org/10.1093/nq/26-5-417>.

Schibanoff, Susan, and Elizabeth H. Hageman, “Cosmology.” *A Milton Encyclopedia*, 9. vols. Gen. ed. William B. Hunter. *Associated University Presses*, 1978-83. 2:78-87.

Thompson, Elbert N. S. “Milton's Knowledge of Geography.” *Studies in Philology*, vol.  
16, no. 2, 1919, pp. 148–171. *JSTOR*, [www.jstor.org/stable/4171748](http://www.jstor.org/stable/4171748).

Warren, William F. *The Universe as Pictured in Milton’s Paradise Lost*. Abingdon Press,  
1915. *Google Books*,  
<https://books.google.com/books?id=If5aAAAAMAAJ&pg=PA1#v=onepage&q&f=false>

Zivley, Sherry Lutz. "Satan in Orbit: 'Paradise Lost': IX: 48–86." *Milton Quarterly*, vol. 31, no. 4, 1997, pp. 130–136. *JSTOR*, [www.jstor.org/stable/24465132](http://www.jstor.org/stable/24465132).

## APPENDIX

Below is a selected list of biblical references (KJV) to the right or left hand.

While the right hand sometimes refers to just the right hand, it often symbolizes importance, honor, or favor. The left hand also can be a neutral representative to the body part, but it generally represents unrighteousness or scorn. Thus, the passage in Jonah which references children who cannot distinguish their right and left hands is synonymous with their not knowing good or evil.

### Old Testament

**1Kings 2:19** Bath-sheba therefore went unto king Solomon, to speak unto him for

Adonijah. And the king rose up to meet her, and bowed himself unto her, and sat down on his throne, and caused a seat to be set for the king's mother; and she sat on **his right hand**.

**Psalms 16:11** Thou wilt shew me the path of life: in thy presence *is* fulness of joy; **at thy right hand** *there are* pleasures for evermore.

**Psalms 110:1** A Psalm of David. The LORD said unto my Lord, Sit thou at **my right hand**, until I make thine enemies thy footstool.

**Ecclesiastes 10:2** A wise man's heart *is* at **his right hand**; but a fool's heart at **his left**.

**Jonah 4:11** And should not I spare Nineveh, that great city, wherein are more than sixscore thousand persons that cannot discern between **their right hand and their left hand**; and *also* much cattle?

## New Testament

**Matthew 22:44** The LORD said unto my Lord, Sit thou on **my right hand**, till I make thine enemies thy footstool?

**Matthew 25:33** And he shall set the sheep on **his right hand**, but the goats on **the left**.

**Matthew 25:34** Then shall the King say unto them on **his right hand**, Come, ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world:

**Matthew 26:64** Jesus saith unto him, Thou hast said: nevertheless I say unto you, Hereafter shall ye see the Son of man sitting on **the right hand** of power, and coming in the clouds of heaven.

**Mark 12:36** For David himself said by the Holy Ghost, The LORD said to my Lord, Sit thou on **my right hand**, till I make thine enemies thy footstool.

**Mark 14:62** And Jesus said, I am: and ye shall see the Son of man sitting on **the right hand** of power, and coming in the clouds of heaven.

**Mark 15:27** And with him they crucify two thieves; the one on **his right hand**, and the other on **his left**.

**Mark 16:19** So then after the Lord had spoken unto them, he was received up into heaven, and sat on **the right hand** of God.

**Luke 20:42** And David himself saith in the book of Psalms, The LORD said unto my Lord, Sit thou on **my right hand**,

**Luke 22:69** Hereafter shall the Son of man sit on **the right hand** of the power of God.

**Acts 2:25** For David speaketh concerning him, I foresaw the Lord always before my face, for he is on **my right hand**, that I should not be moved:

**Acts 2:33** Therefore being by **the right hand** of God exalted, and having received of the Father the promise of the Holy Ghost, he hath shed forth this, which ye now see and hear.

**Acts 2:34** For David is not ascended into the heavens: but he saith himself, The LORD said unto my Lord, Sit thou on **my right hand**,

**Acts 5:31** Him hath God exalted with **his right hand** *to be* a Prince and a Saviour, for to give repentance to Israel, and forgiveness of sins.

**Acts 7:55** But he, being full of the Holy Ghost, looked up stedfastly into heaven, and saw the glory of God, and Jesus standing on **the right hand** of God,

**Acts 7:56** And said, Behold, I see the heavens opened, and the Son of man standing on **the right hand** of God.

**Romans 8:34** Who *is* he that condemneth? *It is* Christ that died, yea rather, that is risen again, who is even at **the right hand** of God, who also maketh intercession for us.

**Ephesians 1:20** Which he wrought in Christ, when he raised him from the dead, and set *him* at **his own right hand** in the heavenly *places*,

**Colossians 3:1** If ye then be risen with Christ, seek those things which are above, where Christ sitteth on **the right hand** of God.

**Hebrews 1:3** Who being the brightness of *his* glory, and the express image of his person, and upholding all things by the word of his power, when he had by himself purged our sins, sat down on **the right hand** of the Majesty on high;

**Hebrews 1:13** But to which of the angels said he at any time, Sit on **my right hand**, until I make thine enemies thy footstool?

**Hebrews 8:1** Now of the things which we have spoken *this is* the sum: We have such an high priest, who is set on **the right hand** of the throne of the Majesty in the heavens;

**Hebrews 10:12** But this man, after he had offered one sacrifice for sins for ever, sat down on **the right hand** of God;

**Hebrews 12:2** Looking unto Jesus the author and finisher of *our* faith; who for the joy that was set before him endured the cross, despising the shame, and is set down at **the right hand** of the throne of God.

**1Peter 3:22** Who is gone into heaven, and is on **the right hand of God**; angels and being made subject unto him.