

2021

## The Walls of the World and the Voyages of the Evening Star: The Byzantine Borders of Tolkien's Biblical/Classical/Medieval/Geocentric/Heliocentric Complicated Cosmology

Kristine Larsen

Central Connecticut State University, [larsen@ccsu.edu](mailto:larsen@ccsu.edu)

Follow this and additional works at: <https://scholar.valpo.edu/journaloftolkienresearch>



Part of the [Modern Literature Commons](#)

---

### Recommended Citation

Larsen, Kristine (2021) "The Walls of the World and the Voyages of the Evening Star: The Byzantine Borders of Tolkien's Biblical/Classical/Medieval/Geocentric/Heliocentric Complicated Cosmology," *Journal of Tolkien Research*: Vol. 13 : Iss. 1 , Article 3.

Available at: <https://scholar.valpo.edu/journaloftolkienresearch/vol13/iss1/3>

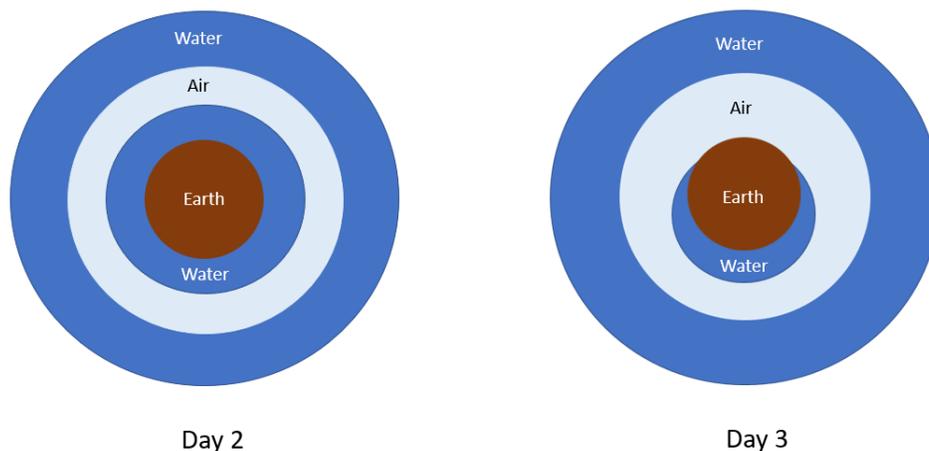
This Conference Paper is brought to you for free and open access by ValpoScholar. It has been accepted for inclusion in Journal of Tolkien Research by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at [scholar@valpo.edu](mailto:scholar@valpo.edu).

*This paper was delivered largely as is at the 2020 International Medieval Congress sponsored by the University of Leeds, and is the second of three related works on Tolkien's early cosmology.*

The first detailed descriptions of Tolkien's cosmology are collected in the posthumous work *The Book of Lost Tales*. These are accompanied by "I Vene Kemen," which son and editor Christopher Tolkien translates as "The Vessel of the Earth," a contemporaneous (circa 1916-20) cosmological diagram (*BOLT I* 85). Christopher describes this as a "very remarkable" sketch in which the cosmology is "presented as a huge 'Viking' ship, with mast arising from the highest point of the Great Lands, [a] single sail on which are the Sun and Moon" (*BOLT I* 83). The world-ship floats within Vai, the Outer Ocean, surrounded by the airs. These are arranged in three layers: Vilna, where birds fly; Ilwë, the realm of the stars; and Vaitya, "which is wrapped dark and sluggish about the world and without it," possibly suggesting an enclosed system (*BOLT I* 65). In her work *The Evolution of Tolkien's Mythology*, Elizabeth Whittingham (109) argues that "This representation of Tolkien's world portrays a three-layered world that parallels those of classical and northern European mythology."

Later maps accompany "The Ambarkanta," or "The Shape of the World," a six-page handwritten manuscript. At the center we have the flat Earth, with its oceans and other bodies of water. Above it lies the ordinary air, or Vista, and further out still is found Ilmen, "air that is clear and pure being pervaded by light though it gives no light" (*SOME* 236). Beyond this is the Vaiya, the "Enfolding Ocean," which is more water-like beneath the flat Earth and more air-like above the flat Earth (*SOME* 236). This in turn is circumscribed by the "Walls of the World. They are as ice and glass and steel... cold, transparent, and hard. They cannot be seen, nor can they be passed, save by the Door of Night" (*SOME* 235). Beyond this lies "Kúma, the Void, the Night without form or time" (*SOME* 237).

Whittingham (111) argues that the diagrams that accompany "The Ambarkanta" resemble those of "the third day of creation in Genesis" found in Norbert Samuelson's *Judaism and the Doctrine of Creation* (Figure 1). She opines that "The Ptolemaic conception of an earth-centered universe ... and the modern scientific image of the solar system and universe is neither confirmed nor denied" in Samuelson's (and we are to assume, by analogy, therefore also in Tolkien's) interpretation (106-7).



*Figure 1: Norbert Samuelson's interpretation of ancient Hebrew cosmology. Diagram by K. Larsen based on Samuelson's original illustrations (pg 162)*

So the question becomes, which is it? Is Tolkien's cosmology classical or medieval? Is there a geocentric to heliocentric "Copernican Revolution"? Instead of simply focusing on the structural layers of the world, we should also look to the motions of the major heavenly bodies, in particular the Sun, Moon, and Venus. The Sun and Moon seem obvious choices, as the brightest lights in the heavens. Venus is the third brightest object and, in addition, as I have described in a previous talk,<sup>1</sup> Tolkien puts a great deal of effort into describing the motions of Venus (in the form of Eärendel the Mariner).

To begin, the Norse influence on Middle-earth is undisputed. Whittingham (104) draws attention to parallels she sees with "early descriptions of Tolkien's world," in particular that "the universe portrayed in the Norse Eddas exists on three planes.... the formation of the heaven and earth from Ymir's skull and blood account for two planes of the universe... the halls of Hel, the Netherworld,... depicting the third plane." She draws further connections she sees between Tolkien's cosmology and that in Hesiod's *Theogony*, where the "universe exists on three planes: the sky arches over the earth around which flows the ocean and below which lies the underworld" (101). The concept of the underworld (and afterlife) in Tolkien's mythology is, how shall I put this politely, complicated, far more so than Whittingham's statement implies. It is true that in the earliest cosmology in *The Book of the Lost Tales*, the halls of Mandos where the Elves await a time to be "born into their children" are delved very deep indeed, "stretching even down under the Shadowy Seas" (*BOLT I* 76).

<sup>1</sup> <https://scholar.valpo.edu/journaloftolkienresearch/vol13/iss1/2/>

However, Whittingham misses an opportunity to draw another connection to Norse mythology. As she notes, Yggdrasil, the World Tree, lies at the heart of the Norse cosmology (103). It serves as an *axis mundi*, the axis of the world. Doesn't the mast of the World ship serve much the same purpose? However, Christopher Tolkien suggests that a "close examination of the original drawing strongly suggests to me that the mast and sail, and still more clearly the curved prow were added afterwards (perhaps a 'jeu d'esprit, without deeper significance')" (*BOLTI* 87).

Tolkien's early cosmology also brings to mind other cultural cosmologies, in particular the ancient Hebrew model. James Christian (495-6) describes the ancient Hebraic universe as

a gigantic bowl of beaten metal... that separated the lower from the upper waters. This 'firmament' was shot through with small holes through which the water could shower upon the Earth. The Sun and Moon were attached to the vaulted firmament and appeared to roll across it each day.... An ocean of water extended around the sides of the inverted bowl and down under the Earth.... Beneath the flat surface on which the people lived 'roots of Earth' plunged deep into the abysmal waters. Also under the earth, near its center, there existed an enormous cavern called sheol where (some said) the ghost-shades of men slept after death (Figure 2).

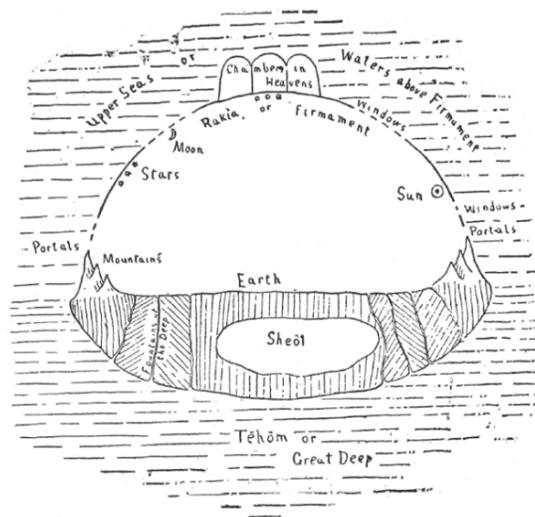
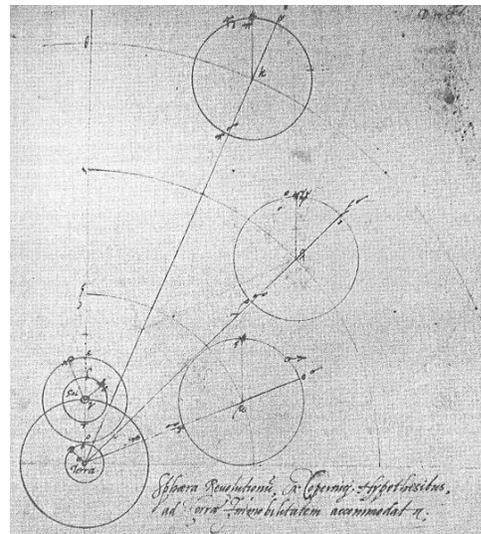


Figure 2. Illustration of the early Hebraic Cosmology. From Chamberlin (84).  
Public domain image courtesy of Wikimedia Commons.

Ignoring the issue of the underworld in Tolkien’s mythology, it is easy to see why Whittingham points out parallels. In particular, returning to Samuelson’s illustration of the Genesis cosmology, Whittingham explains, “he shows the outermost ring of water as still positioned outside the ring of sky. Interestingly, the diagram closely resembles drawings by Tolkien that accompany his cosmological essay *Ambarkanta*” (106). She is clear to point out that “Samuelson’s conception of the earth as a ‘globe’ is influenced, of course, by science since the biblical description does not indicate the shape of ‘the dry land’ and ‘Seas’ that comprise the world” (106). It should be noted that Tolkien’s world clearly begins flat and only becomes globed during a great catastrophe that owes much to the legend of Atlantis (a recurring nightmare Tolkien calls his “Atlantis-haunting” [*Letters* 347]). An even closer relationship between the *Ambarkanta* maps and the cosmology of Genesis is suggested by a simple Google search for any number of such images of the ancient Hebrew cosmology (Figure 2).

So, is Tolkien’s cosmology the universe of Genesis? It’s more complicated. In the Aristotelean geocentric (Earth-centered) cosmology (Figure 3) the Sun, Moon, planets, and stars are composed of ether and travel on concentric ethereal spheres that have the Earth at their center. Below the orbit of the Moon exist the four classical elements, from highest to lowest, fire, air, water, and earth. Ptolemy’s geocentric cosmology (Figure 4) is more complicated, using gear-like combinations of circular orbits (with the Earth slightly off center) to explain the decidedly non-uniform apparent motion of the heavenly bodies (caused by the orbits being heliocentric rather than geocentric and elliptical rather than circular, as eventually demonstrated by Johannes Kepler).



*Figure 3 (Left) and Figure 4 (Right). A simple Aristotelian geocentric universe compared with a more complex Ptolemaic geocentric model. Public domain images courtesy of Wikimedia Commons.*

These geocentric cosmologies became the medieval standard. The Moon orbits closest to the Earth, then the Sun and planets, and finally the Primum Mobile. God resides in the Empyrean (true heaven) beyond the Primum Mobile, and His hand sets the Primum Mobile into motion. This, in turn, sets the inner levels spinning. As described in a previous paper, there were three views of the orbits of the inferior planets Mercury and Venus. Both planets could lie between the Earth and Sun (below the Sun, the preference of Ptolemy), both could lie beyond (above) the Sun (the view of Plato), or one could orbit between the Earth and Sun and the other beyond the Sun. What was undisputed fact was that the Moon was closer to the Earth than either of these planets, and that Mars, Jupiter, Saturn, and the fixed stars lay beyond the Sun (in that order).

With this background in mind, let us examine particular aspects of Tolkien's cosmology in more detail. There were four identifiable stages of cosmological development in Middle-earth, as shown here:

- **Phase 1: ~1914 - 17 (*BOLT I & II*)**  
“The Tale of the Sun and Moon”  
“The Hiding of Valinor”  
“The Coming of the Valar”  
“I Vene Kemen” map  
Eärendel poems and drafts
- **Phase 2: Mid 1920's - mid 1930's**  
First Silmarillion (“Sketch”) @1926-1930  
Versions QI and QII of “The Quenta” (1930)  
“The Ambarkanta” (up to several years later)
- **Phase 3: “The Quenta Silmarillion” (@1937)**
- **Phase 4: During/after *LOTR***  
“Round Earth Cosmology” (“Ainulindalë C\*”) (written by 1948)  
“Myths Transformed” essays (1950s and 1960s)

We will start with the three different types of air apparent in the earliest Ship cosmology. This layering of the atmosphere brings to mind the Aristotelian model, in which the space between the land and waters of Earth and the Moon is divided into two layers. Closer to the surface of the Earth we have cool and moist air, where

clouds and precipitation reside. Above that lies the so-called fire, a warm and dry substance where meteors and comets were thought to exist (Heidarzadeh 5). The second of Tolkien's three atmospheric layers, Ilwë, is where many of the stars resided, described as "silver flames set in vessels of crystal" that sailed like boats in Ilwë, guided by "winged spirits" (*BOLT I* 181). Some of the brighter stars are described as "translucent lamps in Ilwë or Vilna" that "hung and moved not" (*BOLT I* 181-2). Both types of stars can certainly be connected with celestial fire. Aristotle's ether that fills the space from the Moon out to the stars can be thought of as a third gaseous layer, although clearly not identical with Tolkien's Vaitya.

Valinor, the home of the Valar, was lit by two luminous trees, until their destruction at the hand of Melko (later called Melkor). The last golden fruit of Laurelin and some of the fiery petals of last flower were placed into a special vessel to sail heavens, steered by the maiden Urwendi. This was a time of constant and unworldly brilliant sunlight. Tolkien describes the sunship as "Sári the glorious, for whereas that bright galleon voyageth ever above Ilwë and beyond the stars and cleaveth a dazzling way blinding the heavens, highest of all things..." (*BOLT I* 193). The Moon was made from the last silver flower of Silpion (later called Telperion) and because it is heavier remained in lower folds of Ilwe. Ilinsor, the Moon mariner, was jealous of the more brilliant Sun and "hunts the stars" (*BOLT I* 193).

Manwë eventually decided that the Sun and Moon should be moved even farther from the Earth, into "higher paths" so their light wouldn't be so bright. In the east the havens of the Sun and Moon were built, with gates that opened to issue forth the Sun and Moon on their westward journey to Valinor. His first plan was to have the Sun and Moon travel below the Earth from west to east back to their respective gates, protecting them against the effects of the ocean Vai with Ulmo's spell. But the sunship proved too "frail and lissom," leading the Valar to construct the "most mighty of all their works," the Door of Night (*BOLT I* 215). It was opened by a secret word known only to Urwendi and Manwë and led to the outer dark (the starless void) beyond the hand of death. In the east the Gates of Morn opened to Urwendi alone, using the same secret word spoken in reverse. This description brings to mind ancient Mesopotamian cosmology, in which every morning Shamash the Sun god races his sun chariot out through the eastern gates. At sunset Shamash arrives at the western gates, and passing through, drives his chariot along a dark tunnel through the night, beneath the mountains that rimmed the universe, emerging on schedule at the eastern gates again (Christian 496).

Interestingly, Venus actually enters the cosmology before many of the details of the Sun and Moon (in a historical rather than literary sense). In the 1914 poem "The Voyage of Éarendel the Evening Star" (revised a number of times over the subsequent years under different titles) the celestial mariner escapes from harassment from the Ship of the Moon by passing through the Door of Night into

the “starless vast” (*BOLT II* 269). Unfortunately, Tolkien never completed a prose version of the story of Eärendel in the first iteration of his cosmology. In an outline included in the *Book of Lost Tales Part II*, Eärendel’s brightness as a star has nothing to do with possession of a Silmaril gem (the later explanation), but the diamond dust that powdered him as he walked through the empty streets of the city of Kôr. It is this brightness that explains how he caught the attention of the “Moon mariner” and is chased by him (as he chases the other stars); this precipitates Eärendel’s diving through the Door of Night into the starless voids (*BOLT II* 259).

Note that both the Sun and Venus travel through the Door of Night into the void beyond while the Moon is much nearer the Earth. This echoes the Aristotelian/Ptolemaic universe where the lunar realm is closer to the Earth than the Sun. Tolkien is silent as to whether Venus travels below or beyond the path of the Sun outside the void. However, since the Sun moves out one door in the West and into the other door in the East, it might not completely orbit around the Earth. We therefore do not necessarily have a true geocentric model. As described in a previous paper, the Moon Mariner’s pursuit of Eärendil as Venus is generally in keeping with the two objects’ apparent motions along the ecliptic (the zodiac). When Venus is visible, the Moon will ominously appear to approach it for several days each month, as a waxing crescent in the case of the Evening Star or waning crescent for the Morning star.

In Phase II we first meet “The Earliest ‘Silmarillion’” (known as the “Sketch of the Mythology” [*SOME* 11]). The most significant change is that here the Sun and Moon both travel through “the caverns and grottoes beneath the earth, to rise in the east and come home again high in the air over the mountains of the west...” (*SOME* 20). Christopher Tolkien explains that the “astronomical aspect of the mythology has thus undergone a profound shift, an entire re-making” (*SOME* 49). Indeed, we have finally achieved some version of a geocentric cosmology, with both the Sun and Moon making complete circuits around the flat Earth. Since the Sun no longer travels into the void, the orbit of Venus now lies beyond the orbit of the Sun (and Moon and even stars), although, again, we do not know if it is a completely geocentric orbit. In “The Quenta,” the motions of the Sun, Moon, and Venus generally remain the same (*SOME* 98).

Again, in the “Ambarkanta” we see a multilayer atmosphere, possibly paralleling the Aristotelian universe. However, with the “Ambarkanta” in particular we see that relying on diagrams is not always sufficient. Specifically, Tolkien explains that Earth is surrounded on all sides by “Vaiya, the Enfolding Ocean. But this is more like to sea below the Earth and more like to air above the Earth” (*SOME* 235). This is certainly different from the Biblical cosmology, where there was literally a layer of water above the firmament, the source of Noah’s flood, for example (Figure 1). This important nuance is apparently ignored by Whittingham.

Phase III consists of the “Quenta Silmarillion,” written circa 1937, which was largely the source of the published *Silmarillion*. In it the Sun and Moon continue to travel under the Earth back from west to east. As Christopher Tolkien muses, it is unclear how many details of the “Ambarkanta” and its maps were abandoned at this point, but the Door of Night remained, as did the Walls of the World. Both of these were essential for Venus (Eärendel) to travel into the void (and for Morgoth to return through for the Last Battle). For example, it is said of Eärendel’s ship Vingelot that the Valar

hallowed it, and they bore it away through Valinor to the uttermost rim of the world, and there it passed through the Door of Night and was lifted up even into the oceans of heaven... and the Silmaril was bound upon his brow. Far he journeyed in that ship, even into the starless voids; but most often was he seen at morning or at eve, glimmering in sunrise or sunset, as he came back to Valinor from voyages beyond the confines of the world. On those journeys [his wife] Elwing did not go, for she had not the strength to endure the cold and pathless voids, and she loved rather the earth.... (LR 327)

In the fourth phase, documents penned in the late 1940s and beyond, we see a cosmology unrealized, a seismic shift that, if adopted, would have shaken the mythology to its core. A faint later addition to an “Ambarkanta” era map reads “make world always a globe but larger than now. Mountains of East and West prevent anyone from going to Hidden half” (*BOLT I* 242). Perhaps this is a reference to the so-called “Round World Version” of the cosmology, an experimental mythology written by 1948 in which the world is round from the beginning (*MR* 6). While the Sun was already in existence at the formation of the Earth, the Moon was a later creation, ripped from the flesh of the Earth by Melkor and set into orbit around the Earth so that he could “observe thence all that happened below” (*MR* 41). Similar to the main mythology, Melkor is eventually banished by the Valar.

While Tolkien never adopted this alteration of his cosmology, after completing *The Lord of the Rings* in the 1950s he revisited what he called “astronomically absurd business of the making of the Sun and Moon” and toyed with additional round Earth revisions that were posthumously published in *Morgoth’s Ring* (370). In one he clearly states that the “apparent revolution of the Sun about the Earth will be accepted” but adds that in the “supposed primeval epochs before Earth became habitable” Melkor “disarrayed the Sun so that at periods it was too hot, and at others too cold. Whether this was due to the state of the Sun, or alterations in the orbit of the Earth, need not be made precise; both are possible” (*MR* 375-6). In another cosmological myth from the same time period,

Tolkien states that the “Sun was designed to be the heart of Arda,” a heliocentric statement if I ever heard one (MR 380). Clearly we have arrived at a truly heliocentric model, one in which the round Earth orbits the Sun, “an island in the void ‘amidst innumerable stars’” that are “remoter parts of the Great Tale” (MR 375). How far we have come, and it took Tolkien only 50 years, rather than the 1600 of our primary world.

James Christian (496) reflects that “To the ancients the universe was closed, and they felt a kind of security in knowing that.” Tolkien apparently agreed, at least in the beginning, drawing upon, but not simply copying, mythologies with which he was familiar. But the boundaries of Tolkien’s cosmology were semipermeable, first by the Sun and later by Venus (in the form of Eärendel), as he tried to align the apparent motions of the heavenly bodies with the basic concepts of a medieval universe. But as I have argued elsewhere, Tolkien’s cosmology is not strictly medieval, at least as described by C.S. Lewis in *The Discarded Image* (for example instead of being “warmed and lit” having “cold and pathless voids” [Larsen 5]).

In the end, like Copernicus, Tolkien could not ignore the simply logic of a heliocentric cosmology. Still, he could not bring himself to take this final evolutionary step in earnest, as it would break much of what was so poetic in his fictional cosmology.

### Works Cited

- Chamberlin, Ralph V. (1909) “The Early Hebrew Conception of the Universe.” *The White and Blue* 13(11): 84-8.
- Christian, James L. (2006) *Philosophy*, 6<sup>th</sup> ed. Belmont: Thomson Wadsworth.
- Heidarzadeh, Tofigh (2008) *A History of Physical Theories of Comets, from Aristotle to Whipple*. Dordrecht: Springer.
- Larsen, Kristine (2016) “Medieval Cosmology and Middle-earth: A Lewisian Walk Under Tolkienian Skies” *Journal of Tolkien Research* 3.1, article 5. <https://scholar.valpo.edu/journaloftolkienresearch/vol3/iss1/5/>
- Samuelson, Norbert (1994) *Judaism and the Doctrine of Creation*. Cambridge: Cambridge University Press.
- Tolkien, J.R.R. (1984) *The Book of Lost Tales Part I*. Boston: Houghton Mifflin.
- . (1984) *The Book of Lost Tales Part II*. Boston: Houghton Mifflin.
- . (2000) *The Letters of J.R.R. Tolkien*, ed. Humphrey Carpenter. Boston: Houghton Mifflin
- . (1987) *The Lost Road*. Boston: Houghton Mifflin
- . (1993) *Morgoth’s Ring*. Boston: Houghton Mifflin
- . (1986) *The Shaping of Middle-earth*. Boston: Houghton Mifflin.

Whittingham, Elizabeth (2008) *The Evolution of Tolkien's Mythology*. Jefferson:  
McFarland and Co.