

## THE STRUCTURE OF MILTON'S UNIVERSE

### THE SHAPE AND UNITY OF THE WORLD IN *PARADISE LOST*

← →  
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The main constituents of the universe of *Paradise Lost* are both well-known and largely uncontroversial.<sup>1</sup> Milton's heaven, hell, chaos, and cosmos<sup>2</sup> have been widely analyzed, and while there is disagreement over some details, the overall shape of his world is largely the subject of consensus. Briefly reviewing Milton's treatment of space, I want to argue that this consensus is somewhat surprising in that the universe of *Paradise Lost* does not fully conform to our three-dimensional space, yet critics much rather map it out than argue against its internal continuity.

#### HEAVEN, HELL, AND COSMOS

The two primordial regions in *Paradise Lost* are heaven and chaos. The former is "the only stable element in [Milton's] universe" (KNOTT 1970, 495), but its pre-history is uncertain. In *De Doctrina Christiana* Milton suggests that heaven was created (YP 6:311–312 = CD 1.7), but the poem itself offers no substantial clues.<sup>3</sup>

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<sup>1</sup> For major discussions of Milton's cosmology, see MASSON 1874, 1:25–49; ORCHARD 1977 (first published in 1913); WARREN 1915; SVENDSEN 1956, esp. chs. 1–3; CURRY 1957; ME 2:78–87 = s.v. "cosmology"; FENTON 1995; and MARTIN 1997.

<sup>2</sup> Milton never used this term in his poetical works, but the neologism seems justified since all relevant terms such as "universe" or "world," both used by Milton, cross-reference each other in the OED (s.v. "cosmos" 1.a, "universe" 2, "world" n. II.8), and only my choice has a meaning contrasted to chaos (OED s.v. "cosmos" 2).

<sup>3</sup> The closest we come is the Father's speech at the dawn of creation (7.165–173), but the "Heav'n" mentioned there is not the empyrean but the sky (spheres) of the cosmos. The suggestion that God fills all space (7.168–169) seems to imply that the empyrean was also formed by a creative (self-regulating) act of God.

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It is a walled-in yet mind-bogglingly spacious region with a variety of scenery and an abundance of light, which radiates beyond its confines.<sup>4</sup> Not only is its shape “undetermined square or round” (2.1048), but it also exhibits both what we would call within the scope of mundane experience “man-made” and “natural” qualities: it is both city or, indeed, temple complex, and pastoral landscape.<sup>5</sup> It “hath this variety [...] / Of pleasure situate in Hill and Dale” (6.640–641), but it lacks rugged “geological” features. It seems to have one gate, richly decorated,<sup>6</sup> and a mountain at the center, God’s dwelling place; the two are connected by a road (5.253, 7.575–581). Heaven is flat. It is not literally two-dimensional but functionally so.<sup>7</sup> As Walter C. CURRY correctly points out, the “Heaven of Heavens has no sky” (1957, 146):<sup>8</sup> there can be nothing “above” heaven, which is the top-most part of Milton’s world. It is “up” with respect to all other parts of the universe, and everything is down from there. Rebel angels fall from it, and Satan has to find his way upward through chaos to reach it. The entire cosmos is below it.

Hell, at the opposite end of the universe, was definitely created from chaos (2.1002–1003). For all practical intents and purposes, hell is at the bottom of the Miltonic universe not only morally but also spatially. Fire and darkness are hell’s most characteristic—and the “thrice threefold [...] Gates” (2.645) probably its most memorable—features.<sup>9</sup> Hell is also huge with many different geological features, but its variety, such as it is, appears not to delight. Even opposites are not really different here (1.63; 2.228–229, 595). Heaven has no sky; hell is domed over (1.61–62, 345; 2.644). Heaven is city or landscape; Pandæmonium, a city (10.424–425) or a single if massive building (Argument 1.19).<sup>10</sup> Indeed, the whole

<sup>4</sup> For descriptions of heaven, see 1.682, 733; 2.1006, 1034–1037, 1047–1050; 3.427–428, 502–518; 5.253–256, 642–657, 688–689, 712–714, 726, 748–766; 6.1–18, 69–88, 472–483, 509–517, 528, 641–646, 663–666, 859–866, 878–879, 888–891; 7.574–586; 10.31–33, 88–89, 11.16–20. Critical literature has expressed little interest in the physical properties of Milton’s heaven. Ann Gossman’s entry in the *Milton Encyclopedia* is emblematic of the larger scene (3:161–162 = s.v. “Heaven”). See, however, KNOTT 1970.

<sup>5</sup> KNOTT 1970 recognizes two biblical traditions behind this duality: heaven as Jerusalem and as paradise.

<sup>6</sup> Despite a few plural references to heaven’s *gates* (1.171, 326; 2.996; 7.206, 565). The best-known and most detailed description of the entry to the empyrean is 3.501–518.

<sup>7</sup> Cf. 2.1047; 5.648, 726; 6.2, 15–16, 77–78, 474.

<sup>8</sup> *Pace* WARREN 1915, 36.

<sup>9</sup> For major descriptive passages of hell, see 1.60–74, 180–184, 222–237, 670–674; 2.528–557, 571–648, 874–883. In Books 1–2, there are nearly sixty references to flames, fire and burning (eighteen is the corresponding number for Book 6) and some twenty to darkness (excluding those passages pertaining to chaos).

<sup>10</sup> On the basis of a manuscript variant (“Capitoll” corrected to “Capital” in a different hand in 1.756), it has been suggested that originally an allusion to the Roman Capitol was meant (cf. FOWLER 2007, 106n and GILBERT 1947, 105–106).

passage (1.713–730) describes the newly erected seat of Satan in terms of a temple, and it is repeatedly referred to as a “hall” (1.762; 10.444, 522). Denying dissimilarity, limiting the action to a relatively small place in its interior (apart from a few glimpses of the outlying regions, all we see is the fiery lake and a neighboring plain), and representing it as a covered space are so many techniques by which Milton counters the impression of the vastness of hell with a definite sense of suffocating enclosure, memorably imaged in the infernal MPs’ need to “Reduc[e] thir shapes immense” “to smallest forms” (1.789–790) in order to enter Pandæmonium.

We first catch sight of the newly created world as Satan, emerging from hell and chaos, approaches it:<sup>11</sup> “a Globe farr off / It seem’d, now seems a boundless Continent” (3.422–423). The cosmos is like all the other cosmological regions in that it is of enormous extent, but its internal structure is spherical. Satan walks on “the firm opacous Glove / Of this *round* World” (3.418–419, italics added),<sup>12</sup> and the bard keeps reminding his audience of the external globularity of the cosmos (3.422, 498; 10.318). This is a perfect world with a perfect shape.

To keep it safe from the onslaught of chaos, the six-day creation is encased in a hard protective shell<sup>13</sup> (3.419–421) with an aperture at its top. Like the extent of the Holy Land from Dan to Beersaba “So wide the op’ning seemd, where bounds were set / To darkness, such as bound the Ocean wave” (3.538–539). The image is fascinatingly reversed. If its edge limits darkness as a shoreline limits the sea, then the gap must be like an island, with the protected area inside, surrounded by the raging ocean of night. But that means that while the cosmos is enclosed in a protective crust to keep off the dark storms, at the edge of the opening in this crust the *hiatus* bounds chaos. Imaged and imagined as a sea, chaos would violently pour in there, flooding and drowning whatever is inside. The purpose of this analysis is not to point a finger where Milton nodded. Much rather, to indicate where the analysis breaks down and becomes meaningless. The rationalized unpacking does not work—but the poetic line does. It can easily reassert itself on a simple repetition: “So wide the opening seemed, where bounds were set / To darkness, such as bound the ocean wave.” A beautiful and evocative line.

<sup>11</sup> Cf. 2.1004–1006 and 1034–1053 (esp. 1051–1053). For further descriptive details of the cosmos, see 3.74–76, 418–429, 440, 498, 518–522, 538–539; 5.577–579; 10.302–324.

<sup>12</sup> Some editions, e.g. FOWLER 2007, 192, have *globe* for Lewalski’s *Glove*.

<sup>13</sup> Outside this shell is the Paradise of Fools, where Milton exiles “all who in vain things / Built thir fond hopes” (3.448–449).

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## CHAOS

Heaven, hell, and the cosmos are essentially independent cosmological regions. The space between them is not vacuous but occupied by chaos.<sup>14</sup> As a cosmological region, it has elicited much greater scholarly interest than heaven, and Milton's monism is the chief context of critical attention. Sending him on the mission of creation, the Father tells the Son to

bid the Deep  
 Within appointed bounds be Heav'n and Earth,  
 Boundless the Deep, because I am who fill  
 Infinitude, nor vacuous the space.  
 Though I uncircumscrib'd my self retire,  
 And put not forth my goodness, which is free  
 To act or not[.] (7.166–172)

Chaos is thus part of God's being, which he has freely chosen not to order, but which he may nevertheless subject to another creative act to come. It is

The Womb of Nature and perhaps her Grave,  
 Of neither Sea, nor Shore, nor Air, nor Fire,  
 But all these in thir pregnant causes mixt  
 Confus'dly, and which thus must ever fight,  
 Unless th' Almighty Maker them ordain  
 His dark materials to create more Worlds[.] (2.911–916)

My concern, though, is less with chaos's metaphysical status than with its physical qualities. Chaos is dark, deep, and noisy. Depth, indeed, is its most prominent characteristic. Chaos is repeatedly called an "abyss" (2.917, 956; 10.314, 476, 1027), a "gulf" (2.441, 1027; 3.70; 5.225; 10.366), the "deep" (2.891, 961, 994; 10.301), the "profound" (2.438, 980; 7.229), and similar names. Just how deep chaos is, we do not know. Milton occasionally suggests that it is infinitely so. That Satan only falls in it "Ten thousand fathom deep" is fortuitous since he could be falling "to this hour" (2.934).<sup>15</sup> The overall impression these varied designa-

<sup>14</sup> The most significant epic passages on chaos include 2.438–441, 890–1046; 3.70–76; 6.871–874; 7.165–173; 10.282–305, 414–418, 475–480.

<sup>15</sup> For further indications of its boundlessness or infinitude, see 1.177; 2.405, 891–893; 3.12; 7.211–212; 10.471–472). Schibanoff and Hageman note that "more likely, words like 'unbottom'd' and 'Illimitable' are qualitative not quantitative terms" (*ME* 2:78 = s.v. "cosmology").



tions generate is that of a vast and deep region. Add to this the numerous nautical and marine references in the similes,<sup>16</sup> and the emerging image of chaos as a murky and tempestuous ocean will be difficult to resist. No wonder that Satan is “glad that [...] his Sea should find a shore” (2.1011).

The sea may be Milton’s most operative metaphor for chaos, but it is certainly not the only one. Satan, looking for a “path” through it, also calls it “this darksome Desart” (2.976, 973). The point is certainly not to choose between land or sea. It is more helpful to recognize that Satan’s characteristic movement through chaos is flight<sup>17</sup> and his characteristic direction is upwards.<sup>18</sup> The emerging image, a vast and deep ocean through whose desert one finds a way by flying upwards, certainly does not make sense, at least not ordinary sense. But chaos is, literally, an extraordinary place. And if the cumulative case were not strong enough, Milton repeatedly makes the point explicit.

Chaos is “a Boggy *Syrtis*, neither Sea, / Nor good dry Land,” with a “crude consistence” that Satan treads “half on foot, / Half flying; behoves him now both Oare and Saile” (2.939–942). In fact, both the region’s features and his movements are even more complicated:

the fiend

Ore bog or steep, through straight, rough, dense, or rare,  
With head, hands, wings, or feet pursues his way,  
And swims or sinks, or wades, or creeps, or flies[.] (2.947–950)

These three lines of almost pure monosyllables are not simply a masterful linguistic achievement, but they also effectively mimic the arduousness of Satan’s journey. As he is slowed down by the topography of the terrain he has to cross, so the reader gets bogged down in the interminable short words and the heavy spondees of the first two lines and the seemingly endless fivefold coordination of the third. It is not easy to be quickly out of this passage for either Satan or the reader.

As we follow him drawing near the cosmos, Milton reiterates the ambiguity of chaos’s consistency. Satan “Wafts on the calmer wave by dubious light” (2.1042)—the image, reinforced by the simile of “a weather-beaten Vessel” in the subsequent

<sup>16</sup> E.g. Argo and Ulysses (2.1017–1020), weather-beaten vessel (2.1043–1046), seashore (3.539), polar winds over the sea (10.289–293), floating Delos (10.296), Xerxes beating the waves (10.307–311).

<sup>17</sup> See 2.407–408, 928, 943–947, 1012–1013, 1045–1046; 3.71–73; 10.284, 316 for passages that describe Satan as flying.

<sup>18</sup> See 2.408, 928–938, 974, 1012–1014; cf. 1.45–47, 173–174; 2.771–772; 3.20; 6.864–865, 871–873; 10.394, 414–415.

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lines, is that of sailing on the sea—yet God observes him “Coasting the wall of Heav’n on this side Night / In the dun *Air* sublime” (3.71–72, italics mine), that is, flying. That, despite 2.1045–1046, the duality cannot be explained away as a matter of gradation is made clear by the fact that the new world “seem’d / Firm land imbosom’d without Firmament / Uncertain which, in Ocean or in Air” (3.74–76). Again, Satan arrives here flying (cf. 3.422, 10.315–318) “where bounds were set / To darkness, such as bound the *Ocean wave*” (3.538–539, italics mine). Air, water, or land; aviation, seamanship, or anabasis? The details remain blurry.

This region, then, is what its name says it is: chaos. Its dimensions and directions, its solidity and material consistency, or the kind of movement required to cross it are all undetermined. Milton is clearly not careless with the details. On the contrary, he very carefully forestalls our meaning-making efforts by undermining the applicability of every category we may superimpose on the evidence to make sense of it. It is no accident that *confusion* and *anarchy* are key terms of the region.<sup>19</sup>

## SURVEY FROM THE ORIFICE

We have now briefly inventoried the major constituents of Milton’s universe. The spot we have reached with Satan is the perfect place for a survey of the interconnectedness of the cosmological regions as we are on the brink of chaos and all other realms can be reached with relative ease from here. The cosmos hangs on a golden chain from heaven, and Milton’s wording alludes to its *dependent* status (2.1051–1052). Apart from “A passage down to th’ Earth” (3.528), a mysterious structure also leads up to the gate of heaven (3.501–518). It is a retractable ladder or stairway which facilitates communication between the empyrean and the new world. Before Adam and Eve are expelled from paradise, there is yet another road leading away from this spot. Unlike heaven’s stairs that can be drawn up, this is “with Pinns of Adamant / And Chains [...] made all fast” (10.318–319). It is the causeway, paved by Sin and Death tracing Satan’s trail through chaos, that links hell to its new colony after the fall.<sup>20</sup>

Sin and Death exhibit architectural ingenuity that would make any civil engineer pale with jealousy but for the supernatural powers of the building crew. What is of significance for us, however, is not how they build<sup>21</sup> but what they

<sup>19</sup> Cf. 2.896–897, 914, 952, 966, 988, 996; 3.710; 6.871–873; 10.283, 472.

<sup>20</sup> See esp. 2.1024–1033 and 10.282–305 for details.

<sup>21</sup> On that, see ORCHARD 1977 or CURRY 1957, 153.

construct. As usual, Milton is liberal with his synonyms,<sup>22</sup> of which “Bridge” (2.1028, Argument 10.9, 10.301) is the most prominent, reinforced not only by the Xerxes simile (10.306–311) but also by the pun in “the work by wondrous Art / Pontifical” (10.312–313), literally, “bridge-building” (*OED* s.v. B.II.6).<sup>23</sup> Note also that *over* is the only preposition used to define its relative position to the surroundings (esp. 2.1027; 10.301, 314). What remains to see is what this stupendous overpass connects. “From Hell [it] continu’d reaching th’ utmost Orbe / Of this frail World” (2.1029–1030). In Book 10 it is described as reaching “Deep to the Roots of Hell” at one end and “joyning to the Wall / Immovable of this now fenceless world” (10.299–303) at the other (10.391–394, 415). Milton, nowhere hinting that the bridge was not of a piece, uses it to connect hell on the bottom of chaos, pictured like an ocean, with the cosmos floating on its surface and thereby to challenge our meaning-making efforts and remind us that consistency is not a demand legitimately pressed against his chaos.

Our vantage point near the aperture is a singular spot. Milton draws attention to it by making it a stop both ways on Satan’s return trip between hell and earth. The site is hardly the center of the universe, but it is unique because it is here that

in little space  
The confines met of Empyrean Heav’n  
And of this World, and on the left hand Hell  
With long reach interpos’d; three sev’ral wayes  
In sight, to each of these three places led. (10.320–324)

Mindele TREIP recognizes the Y of emblematic representations of free will in the three ways (1991, esp. 162–163, 169–170).<sup>24</sup> The upward pointing left and right prongs symbolize the paths of vice and virtue, respectively, between which humans have to choose. Just like the road to damnation, the upper left tine of Y is wider in numerous typefaces than the one on the right. Milton reliteralizes here the alphabetical metaphor. While it takes considerable sophistication to perceive the connection with emblem literature (no editor whose work I have consulted pointed it out prior to Treip’s article), a much more obvious detail may equally well escape attention in the description above. It is no accident that the road on the left (*sinister*) leads to hell. Yet *left* is a relative term and depends on orientation and point of view. Milton, nevertheless, employs it as an absolute point of

<sup>22</sup> Cf. 2.1026; 10.300, 304–305, 313, 394, 415.

<sup>23</sup> Cf. 10.348. MASSON 1874, 1:373 conjectures that the word “pontifice” is Milton’s own coinage.

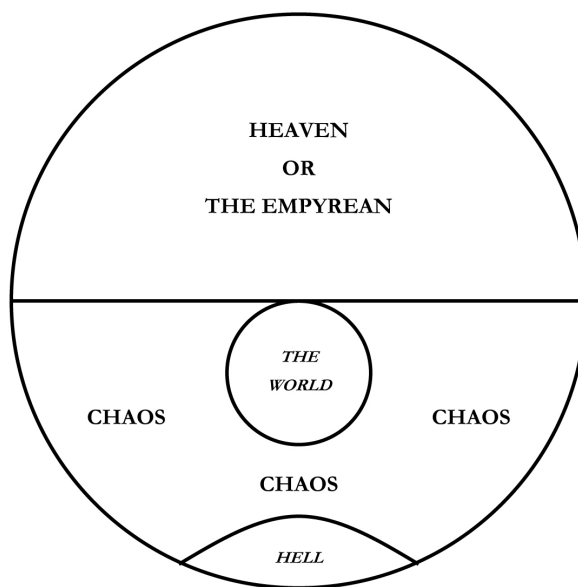
<sup>24</sup> Orchard’s outline, reproduced in *Figure 2*, gives some illustration of what is meant.

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the compass. By implication, there can be only one orientation, one correct point of view in his universe.<sup>25</sup> It is now time to map out this world.

## MAPPING MILTON'S UNIVERSE

Several visual representations of Milton's universe have been produced, four of which I will review here. All four are different, yet there are also significant correspondences between them. David Masson's (*Figure 1*)<sup>26</sup> is both the oldest and the simplest. Thomas Orchard's (*Figure 2*)<sup>27</sup> is square rather than round and shows more internal detail, but it is essentially a variation on the earlier sketch.



**Figure 1** MASSON'S "diagram of the Universal Infinitude" (1874, 1:32)

<sup>25</sup> Cf. QVARNSTRÖM 1967, 53n and n. 32 on p. 45, below.

<sup>26</sup> The reproduction here offered is my own, based on the original in MASSON 1874, 1:32. The diagram was also reproduced, with slight alterations, in ORCHARD 1977, 54 and WARREN 1915, 73.

<sup>27</sup> The 1913 first edition of Orchard's work had a slightly different version, with the causeway touching hell at the bottom left rather than center. The sketch was modified by 1915 (cf. WARREN 1915, 77–78).

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Heaven is in the upper half and hell at the bottom, with chaos, from which the cosmos is carved out near the lower part of heaven, separating them. Orchard's greatest novelty, apart from the internal structure of the cosmos, is the addition of the ladder and the causeway connecting the orifice to heaven's and hell's gates, respectively.

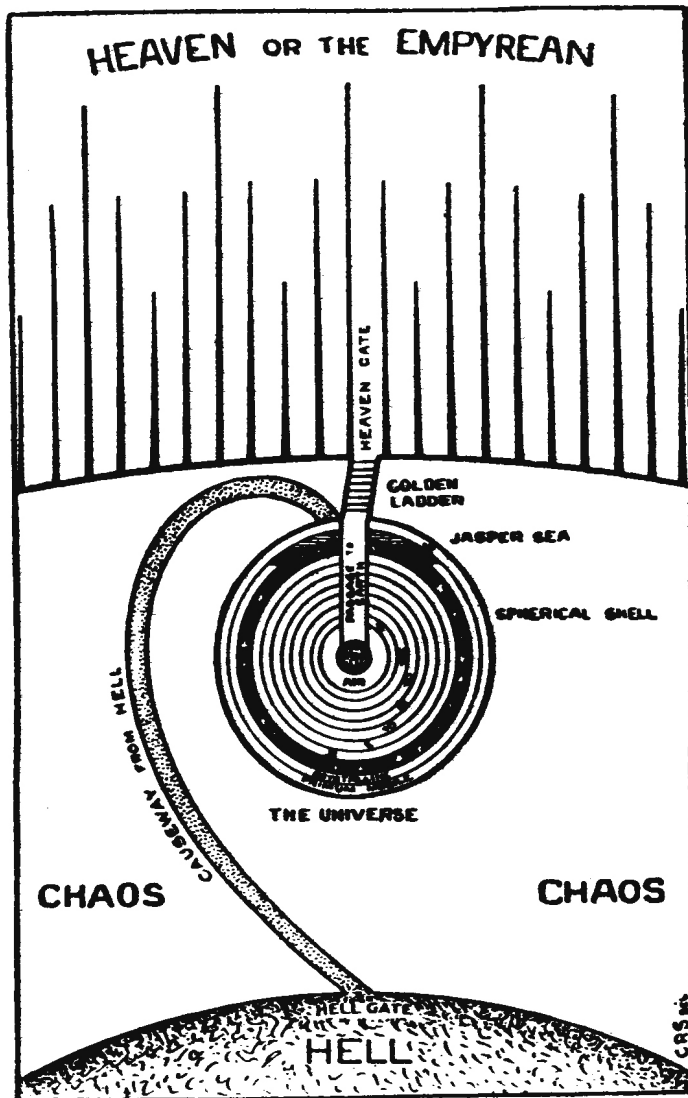


Figure 2 "Scheme of Paradise Lost" by ORCHARD (1977, frontispiece)

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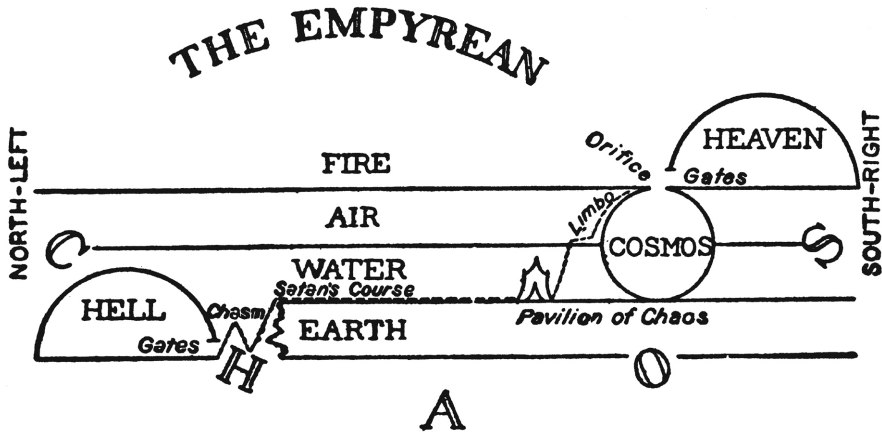


Figure 3 "Himes' revised diagram of Milton's universe" (WARREN 1915, 72)

In his collection of cosmographic outlines of Milton's world up to the early twentieth century, William WARREN (1915, 72) reproduces a third diagram by John Andrew Himes (*Figure 3*).<sup>28</sup> This, too, is a two-dimensional cross-section, but the intersecting plane is now at right angles with that in Masson's and Orchard's outlines. If those were frontal views, this is a side view. As a result, the largely functionless dimension of "breadth" is replaced with a meaningful "depth." Hell is in the bottom left corner, across from heaven in the top right. Directions are morally significant. Hell's end is not only left (literally sinister) but also north<sup>29</sup> while heaven's right is also south.<sup>30</sup> Vertical directions are not designated as good and bad, but surely only because such additional information seemed superfluous to the author. Heaven proper and hell are relatively small domed regions; the cosmos, somewhat smaller but still comparable in size, is situated below heaven's gate, nearly adjacent to it.<sup>31</sup> It is, however, considerably removed from hell along the horizontal axis. The whole space is vertically struc-

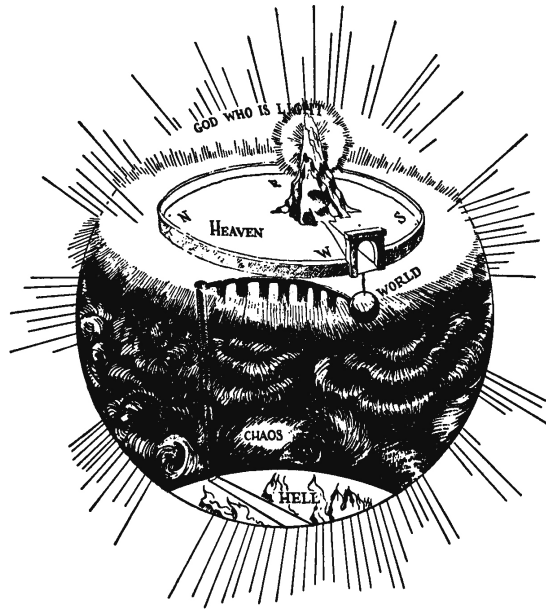
<sup>28</sup> Originally, in a slightly different form, in John A. Himes, *A Study of Milton's Paradise Lost* (Philadelphia: Lippincott, 1878). The reproduction is based on the modified version taken by Warren from Himes' edition of *Paradise Lost: A Poem in Twelve Books by John Milton* (New York: American Book Co., 1898).

<sup>29</sup> On the confusions of the moral as well as the physical dimensions in chaos, see FENTON 1995, 93–96 and MARTIN 1997, 101.

<sup>30</sup> Since east and west are not defined (we do not even know in which plain—vertical or horizontal—Himes would situate them), we must not draw too far-reaching conclusions, but heaven's gate is apparently on the northern side, which is the region of Satan's rebellion (5.689, 726, 755; 6.79).

<sup>31</sup> Himes' arrangement does justice to details in 2.1006 and 3.501–543.

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**Figure 4** CURRY's "diagram suggesting the relationship between God, who is infinite light, and total space with its content of emanated and created reality" (1957, 156)

tured by layers of the four elements, earth, water, air, and fire in their appropriate order from bottom up. The lower three are marked as being part of chaos while fire apparently belongs to the heavenly realm, most of which is occupied by the empyrean. The strict layering is questionable, for the elements are in constant strife in chaos (2.898–906), but the ambiguity of 3.74–75 is satisfied in that the cosmos is surrounded by both water and air. Chaos's pavilion, missing from the other diagrams, is situated in the layer of water. The causeway as such is not marked, but Satan's journey is traced with some precision, including his fall (2.931–938), marking a "chasm" in the structure of the universe. The direction of his progress is both upwards and left to right: Satan is moving in both a spatial and a moral universe (cf. CURRY 1957, 89–90; MACCAFFREY 1959, 64–73).

If Himes effectively added a dimension to Masson's and Orchard's diagrams, the fourth sketch by Walter Curry (*Figure 4*), a perspectival image, adds yet one more. It depicts a round but flat heaven with God's mountain in the middle and relatively low walls around, distinctly resembling those of a this-worldly fortress. The "Empyrean road" of 5.253 provides easy access from heaven's gate in the west to the center. CURRY, in my view erroneously, claims that "there are geo-

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graphical directions in Heaven" (1957, 147).<sup>32</sup> The globe of the cosmos hangs on a chain like a small ball near heaven's gate, and Curry connects it to hell with a peculiar shaft-cum-bridge.<sup>33</sup> We do not see the interior of the cosmos here, but the picture offers the only differentiated view of heaven and also a glimpse of detail, though not necessarily correct, of hell.<sup>34</sup> *A Milton Encyclopedia* picks Curry's representation as "a workable diagram"<sup>35</sup> but faults it for attributing a definite round shape to both Milton's universe and his heaven (*ME* 2:78 = s.v. "cosmology"). CURRY's text (e.g. 1957, 88 and 144–148), however, makes it amply clear that he is aware of the uncertainties involved. The overdefiniteness of the representation is simply due to the difficulty of depicting potentiality and ambiguity over concrete shapes.

## INTERPRETIVE DIAGRAMS—INTERPRETING THE DIAGRAMS

There are several interpretive questions that the diagrams settle in their own ways.<sup>36</sup> I have already discussed the significance of directions, which Masson and Orchard ignore, Himes seems to treat quite felicitously while Curry, in my estimate, overinterprets without sufficient textual warrant. A major issue is the relative size of heaven, chaos, and cosmos. MASSON explicitly affirms the equal size of the two primordial regions, at least as far as infinite space can be divided into equal halves (1874, 1:27). ORCHARD seems to follow him in this (1977, 62),

<sup>32</sup> The notion seems quite entrenched. QVARNSTRÖM, who never mentions Curry, also asserts, without supporting evidence, that the rebels were driven westwards in heaven (1967, 20) and speaks of "the western gate of Heaven" (1967, 26). His authority in the latter instance is 2.1006, which seems doubtful to me, as does, consequently, his conclusion that "'east' and 'west' become fixed points of reference [...] in the heavenly part of [the epic's] poetic universe" (1967, 53n). Surely, Satan's rebellion takes place in the north, which Milton affirms on biblical authority (Isa 14:12–14, esp. 13; Jer 1:14, 4:6, 6:1; see also FOWLER 2007, 326n), but the other points of the compass are never named in an empyrean context although they, especially *east*, often appear for orientation on earth.

<sup>33</sup> He constructs the causeway from two distinct sections, "one leg leading like a tunnel upward through chaos to the dimly lighted frontiers of Chaos and Old Night, and another leg built like a bridge from that point over and above the roaring sea of chaos off the coast of Heaven to the outer sphere of the World" (CURRY 1957, 152, cf. 154). In the diagram, he also adds a third leg reaching down from the dome of hell to its central region. The arrangement lacks textual basis and seems to me an overrationalization of the Miltonic evidence.

<sup>34</sup> Himes offers a separate map of that region, cf. WARREN 1915, 79.

<sup>35</sup> It has also been reprinted in HUGHES 1957, 180: Curry's figure seems to have replaced Masson's sketch as the critics' diagram of choice.

<sup>36</sup> The overall shape (square or round) of the diagrams I take to be rather accidental than properly significant.



and both of them take heaven and the empyrean to be coterminous. Himes definitely differs from them on the latter count, and his sketch, like Curry's diagram, also gives the impression that chaos has a greater spatial extent than the empyrean.

The differences in the size of the cosmos are even more pronounced although here we have some textual evidence to account for. The devils' "portion [was] set / As far remov'd from God and light of Heav'n / As from the Center thrice to th' utmost Pole" (1.72–74). MASSON takes those lines quite literally and avers that

as to the proportions of this World to the total map<sup>37</sup> Milton dares to be exact. The distance from its nadir or lowest point to the upper boss of Hell is exactly equal to its own radius; or, in other words, the distance of Hell-gate from Heaven-gate is exactly three semidiameters of the Human or Starry Universe (i. 73, 74). (1874, 1:32)

ORCHARD is more reserved and takes issue with the claim of precision: "the poet, instead of being exact, only intended to convey the impression of a vast and indefinite distance" (1977, 89; cf. GARDNER 1965, 39–40). Himes interprets the two-thirds only in terms of the vertical axis but includes a much greater distance horizontally. Finally, Curry decidedly reduces the cosmos in size. There are, of course, further options. FOWLER shifts the attention to earth's position at the center of the cosmos. "Earth divides the interval between heaven and hell in the diapason 1:2 proportion Neoplatonists held advisable between reason and concupiscence" (2007, 64n). Thomas NEWTON noticed in the eighteenth century that the distance between Homer's Hades and earth, equaling that of heaven from earth, is doubled by Virgil. Milton may simply have wanted to go with the trend and outdo his models by increasing the distance to threefold (1749, 1:14n)—which he, of course, did not. The graded proposal is clever but inaccurate. It is *heaven* that is three times as far from hell as earth is from it.<sup>38</sup> But these readings are still subject to B. A. WRIGHT's critique of literalism. Better, he counsels in a brief essay designed to retire Masson's diagram, to read Milton's lines as a simile. He avers,

<sup>37</sup> An overstatement: actually, only the proportions of chaos and the cosmos can be established on a literal interpretation of the lines in question.

<sup>38</sup> The proportion is the same in Virgil (see the *Aeneid* 6.577, cited by NEWTON 1749, 1:14n; cf. PÉTI 2012, 211). BENTLEY first emended the line to "As thrice from Arctic to Antarctic Pole" but, still not satisfied with the result, finally settled for "Distance, which to express all Measure fails" (1732, 4–5n).

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“thrice” is of course an intensive, or rather indefinitely extensive, not a computative expression; nine or any other larger mystic number would be no more adequate if taken literally, would still not give room and verge enough. The poet is not measuring off the distance but saying that it is immeasurable. (1945, 43)

Wright's thesis, anticipated by Bentley and Orchard, quickly gained wide currency,<sup>39</sup> but rather than putting an end to mapping Milton's universe, it contributed to a redefinition of its internal proportions, witness Curry's diagram (and its reception).

A much less significant but equally instructive issue is the wall of heaven. I have already commented on CURRY'S arrangement. He explains that heaven's “[l]ight streaming from its walls clarifies and beats down the adjacent chaos into a sort of turbulent sea-surface, whose waves roll against the battlements of Heaven as upon a shore” (1957, 146). Himes' domed heaven avoids the question, and Orchard's diagram seems to suggest, if anything, vertical walls of almost infinite height. MASSON takes a different route. He speaks of “the crystal wall *or floor* of Heaven” (1874, 1:29, emphasis added), and he no doubt means it, for the exact same phrase reappears on the next page. Given his diagram, the equivocation certainly makes sense. Yet there is no textual basis for this reading. Milton mentions both the walls and the ground or pavement of heaven (never its “floor”), but never does he even remotely hint at their identity. The walls serve a protective function while heaven's ground is like that of the other formed realms: rich in “geological” features as well as flora, solid, and can be mined.<sup>40</sup> Clearly, critics have a difficult time making sense of Milton's text and arranging all its relevant details into a consistent whole, but that does not deter them from trying, and they all propose their own solutions.

Finally, the nature (shape and consistency) of chaos and, consequently, of the causeway is mostly papered over by the spatial outlines. Masson altogether avoids the question, and Himes also largely eludes it although, upon reflection, his sketch suggests that the infernal bridge must span a distance both left to right and bottom to top (surface) through earth, water, and air. Orchard's chaos, like Masson's, is vacuous, and the causeway's precise shape is neatly indefinite, thanks to the missing dimension of depth from the outline. Curry is the only one who

<sup>39</sup> Cf. GILBERT 1947, 97n; CURRY 1957, 149; MACCAFFREY 1959, 78n, all quoting WRIGHT 1945. Kester SVENDSEN summed up this poetic strategy in the memorable phrase “heroic vagueness” (1956, 63).

<sup>40</sup> Hell probably has no plants, but all three cosmological regions have hills and plains and valleys. The rebels can mine metal ores both in heaven and hell, and eventually they teach humanity to ransack the earth (cf. 1.670–690 and 6.507–520).

graphically signals the chaotic nature of chaos. Given his perspectival image, he must be more careful with the details of the bridge from hell, and he opts for rational consistency over against faithfulness to the poetic text.<sup>41</sup> Again, four diagrams with so many options, but each presents a complete whole in its own way.

Despite their inevitable shortcomings, the diagrams are helpful to give the reader some orientation in the imaginative world of *Paradise Lost*. While Himes' and Curry's images may have definite advantages, and only a few disadvantages, over the first two sketches, there is general agreement between all four. Differences are minor though not unimportant, and there is widespread consensus on the basic shape of Milton's universe. That is my main point. The overall spatial design of the world of *Paradise Lost* is not a problem for critics (though literalism in some details is)—despite numerous complicating factors that undermine any simple clarity.

#### COSMOGRAPHY OF CONFUSED DIMENSIONS

There is much ambiguity surrounding spatial measurements in the epic. How far is the golden chain from which the cosmos hangs (2.1004–1006)? It is never specified. The ladder or stairway does not strike the reader as of prodigious size like the causeway. The intervening space is reduced in the account of the vain spirits' arrival in the limbo of vanity (3.484–489), and the area completely disappears from the descriptions of the angelic journeys (cf. n. 42, below). Yet the only explicit indications of distance we have emphasize its greatness. The stairway is "a Structure high" that "Ascend[s] by degrees magnificent" (3.502–503); the wall of heaven is "distant farr"; and the starless outer shell only "som small reflection gaines" from it (3.428).

The size of the cosmos is similarly undetermined. We saw how Masson and others took it to fill two thirds of the space between heaven and hell gates. When Satan catches sight of it, however, it appears "in bigness as a Starr / Of smallest Magnitude close by the Moon" (2.1052–1053). That the point is the *smallness* of the cosmos, there can be no doubt (cf. 3.422–423). But the simile is revealing on yet another level. Given this world's proximity to heaven, on one possible reading the moon is metaphorically identified with the empyrean—against an implied background of a vast night sky, standing for chaos in the image. Even heaven seems small in comparison with chaos.

<sup>41</sup> I will suggest below that, given the ultimately two-dimensional nature of perspectival images, there are other options as well.

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The treatment of distance is ambiguous in yet another way. Vastness is perhaps the most consistently presented characteristic of both individual cosmological regions and the whole universe. In terms of movement, however, it is a fairly small world. Chaos is crossed in nine days by the falling angels (6.871); the same journey from heaven to hell gate (and back) is performed in a single day by Raphael (8.229–231). However huge the inside of the cosmos, its center can be swiftly reached from the periphery at the speed of angels. Satan, Raphael, Michael, and the angelic guards all cover the distance in a matter of hours if not less, while Uriel completes a return trip from the sun to paradise in a few minutes—not to mention the Son's instantaneous descent which "Time counts not" (10.91).<sup>42</sup> The function of these episodes in their original contexts is certainly not to signal the limited size of either the cosmos or the entire universe. On the contrary, the nine-day fall is a long period of epic action,<sup>43</sup> and the distance covered by Raphael is "inexpressible / By Numbers that have name" (8.113–114).<sup>44</sup>

Much more disturbing than the indefiniteness of distances is the fluidity of dimensions in the world of *Paradise Lost*. Raphael is quite fond of mixing dimensions in order to express immensity. When, describing the rebels' march, he compares the width of a heavenly region to (ten times) the length of an earthly piece of land and, just for good measure, throws in a further indefinite multiplier (6.77–78), Adam surely gets the point. Heaven is enormous—but the comparison is impeccable and might even be captured in a mathematical formula. The effect is more striking in the description of the angelic camp stretching "Wide over all the Plain, and wider farr / Then all this globous Earth in Plain out spread" (5.648–649). This comparison can be read in two ways. First, the area of the wide heavenly plain is greater than the entire surface of the earth (recall the Mercator projection, known since 1569). On another reading, however, the *width* (distance) of the empyrean field is likened to the *volume* of the earth converted to an *area*. Here both steps of conversion involve dimension leaps. The impression may ultimately be checked by our rationalization of the image, and we may settle for the first reading, but it is at a price on the level of poetry that we opt for coherence. The profusion of terms like *wide*, *plain*, and *globous* in a short passage, invoking one, two, and three-di-

<sup>42</sup> For details, see 3.562–742 (Satan); 5.265–276, 8.110–114 (Raphael); 11.126–136, 203–223 (Michael); 10.17–21 (angelic guards); 4.555–592 (Uriel).

<sup>43</sup> Not to mention that the numerical parallelism in 6.871–872 recalls the numerical mashal of Hebrew poetry and adds another level of complexity to the interpretation.

<sup>44</sup> Cf. Bentley's emendation for 1.74 in n. 38 on p. 46, above.

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mensional geometric figures, respectively, surely serves to dazzle our spatial senses.

The confusion of dimensions is complete in a third passage. Raphael speaks of

Regions to which  
All thy Dominion, *Adam*, is no more  
Then what this Garden is to all the Earth,  
And all the Sea, from one entire globose  
Stretcht into Longitude[.] (5.750–754)

Again, we have area, volume and distance dimensions compared, but this time without any option of explaining away the spatial mix-up. Raphael would explicitly have us stretch a solid into a line, almost as if the globe were a gargantuan ball of string that could be unwound in an instance. Ultimately, the meaning is simple. The angels covered enormous distances. The passage therefore works perfectly in a poetic-evocative sense, yet it defies our attempts at coherent geometric rationalization. But, and that is my point, that fact does not seem to have greatly bothered critics.<sup>45</sup>

Raphael is not the only narrator whose descriptions of heaven challenge our sense of space and dimensions. The bard's account of chaos, and of the unholy trinity's journeys through it, works similar effects. We have seen the difficulties involved in determining the shape of that region. Chaos is deep, yet Satan, and especially Sin and Death following his track, have to cross it as a bridge arches over a chasm. Heaven is above it yet also on its shore. Similarly, hell is at the same time on its bottom and on its coast. Satan has to walk, wade, creep, swim, fly through it, all the while maintaining a basically upward direction. But his motion is not purely vertical. He does not see heaven from below in a Masonian sense. Rather, he moves along its battlements, "Coasting the wall of Heav'n" (3.71), and looks up to it as we look at a castle on a hilltop. He is not simply below but also outside the gate. As in so many other details, Allen GILBERT sees in the passages depicting hell as "a land bordering on the ocean of Chaos" (1947, 98) evidence of compositional cracks and insertion. I need not argue that he is wrong in order to assert that Milton creatively integrated

<sup>45</sup> BENTLEY thinks the lines are interpolated and would like to leave them out altogether (1732, 175n), but NEWTON keeps them without so much as bothering to mention his predecessor's objection (1749, 1:371n). GILBERT, another great dissector of Milton's poetry, also lets them stand as of a piece with their context (1947, 155).

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the discrepancies between the two models, which produced an organic if not logically coherent whole. Reality, Milton surely knew, is often more paradoxical than our neat logical categories can account for. Since poetic language is not bound to logical formulae, the bard can affirm what we cannot fully comprehend. Chaos is

a dark  
Illimitable Ocean without bound,  
Without dimension, where length, breadth, & highth,  
And time and place are lost[.] (2.891–894)

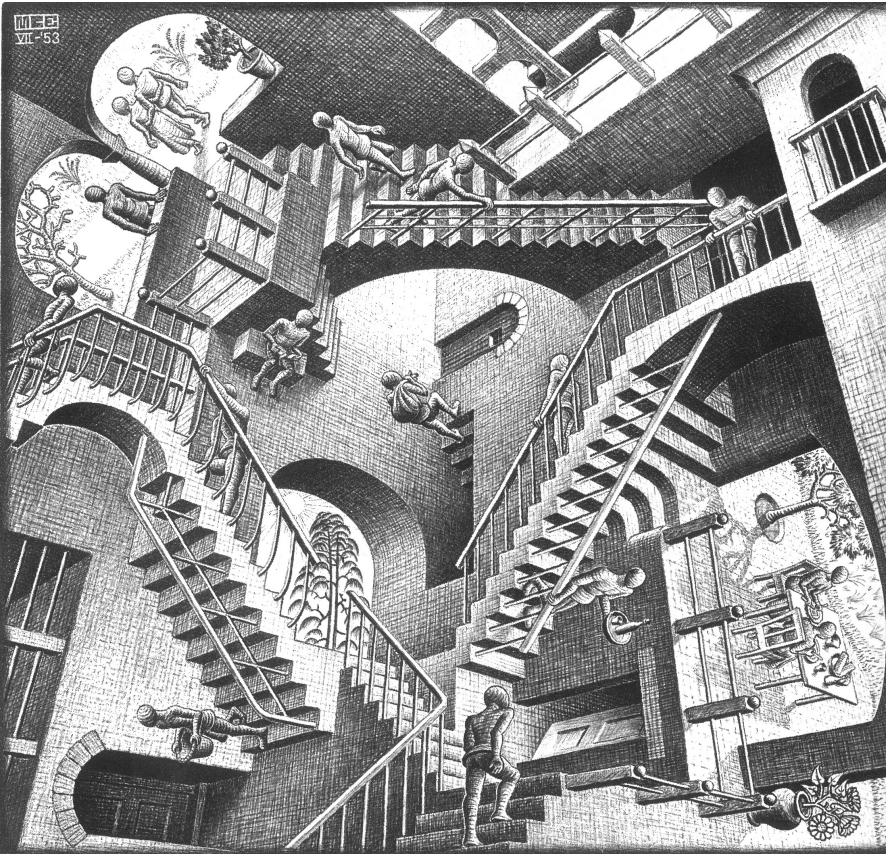
The details of Satan's journey provide a brilliant illustration of this thesis. Dimensions are thoroughly confused in chaos. If this is taken literally, spatial continuity between chaos and hell on the one hand, and heaven and the cosmos on the other, should be denied. That is rarely if ever done, however (witness the several single diagrams of all space Milonic), and for good reason. Satan's and his cronies' repeated crossings as well as the very building of the causeway all serve to establish spatial continuity.

One can only wish that someone had employed M.C. Escher as an illustrator of *Paradise Lost*. He could have presented us with an adequate, if mind-boggling, depiction of Milton's chaos where all dimensions are lost. Escher's *Relativity* (Figure 5) may serve to generally disorient our spatial senses while the ladder of *Belvedere* is like the steps leading up to heaven's gate (Figure 6). The persons climbing up are both beneath and outside the top, yet the upper tier (heaven) completely covers the space beneath (chaos). The channel in *Waterfall* almost maps Satan's journey through chaos (Figure 7). Following the path of the water, one appears to move horizontally but at the end of the journey realizes that one is *above* the very same spot from which one started.

However we image the universe of *Paradise Lost*, it is not a seamless whole. On the contrary, the intersections of its constituent realms are quite pronounced. Much of the action takes place here, at hell's gate, along heaven's wall, or on the outer shell of the cosmos. These borderline areas are nevertheless rather murky and terribly difficult if not impossible to picture with any precision and consistency, and chaos itself, which holds the whole design together, all but defies rationalization. Yet, and this is the important point to register, nobody doubts that in its final shape the Milonic universe forms a complete whole.

Milton's treatment of space is, then, double-faced. On the one hand, it constantly teases us by foiling our interpretive efforts; the universe of *Paradise Lost* cannot be consistently described in terms of conventional Euclidean geometry.

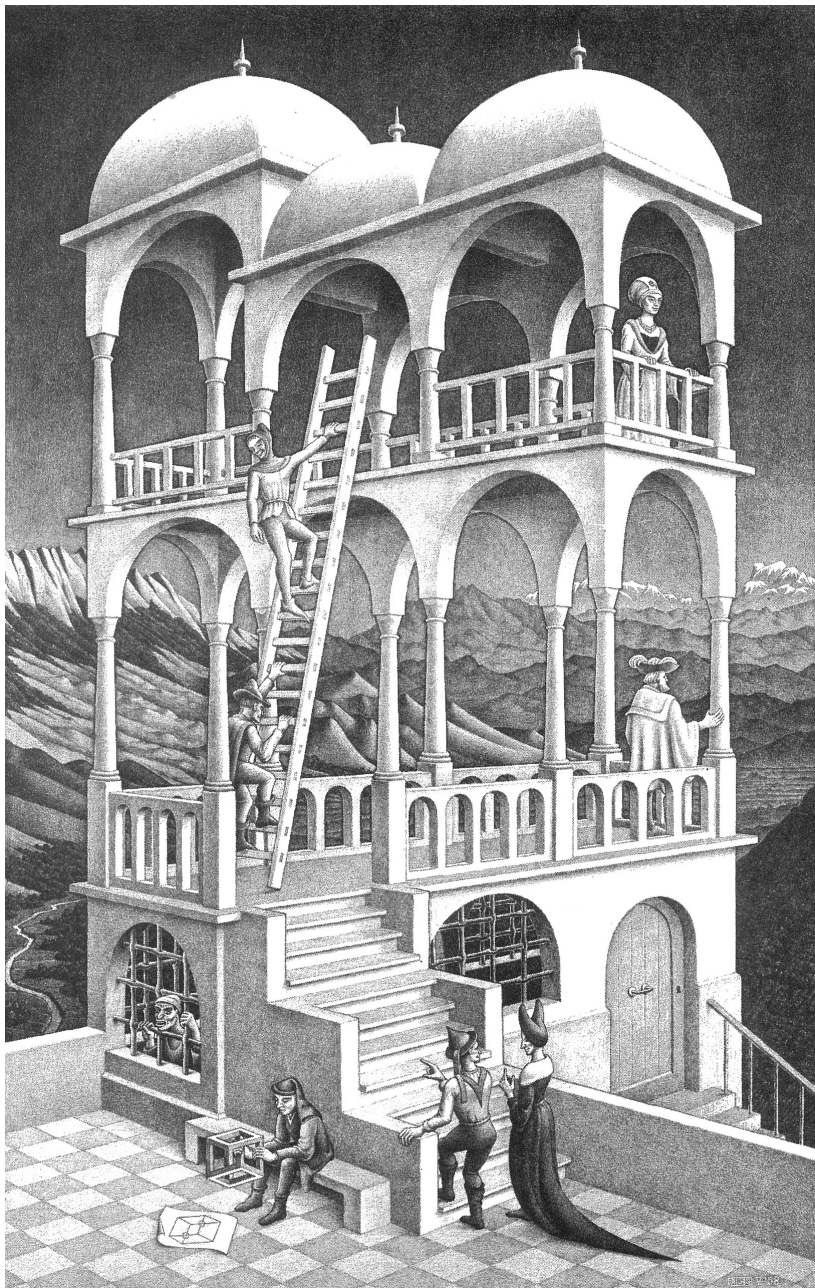
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**Figure 5** M.C. Escher, *Relativity* (1953)

On the other hand, Milton's text does convey a sense of coherence and internal consistency even in spatial terms. The world of the epic might be a "mythic" place transcending our mundane experience, but it is also *our* world. Milton criticism, it seems to me, has not only sensed this two-sidedness but managed to hold the conflicting interpretations in tension. The duality, like Escher's pictures, might open up new vistas and offer us challenging new perspectives on reality. And that in turn is a lesson that might prove instructive in other contexts, notably in the discussion of epic chronology and the treatment of time in *Paradise Lost*, but that is a different story that must await another opportunity to explore.

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**Figure 6** *M.C. Escher, Belvedere (1958)*



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Figure 7 M.C. Escher, Waterfall (1961)

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