

Milton's Astronomy and the Seasons of Paradise: Queries Motivated by Alastair Fowler's Views^{1*}

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In the "Introduction" to his second annotated edition of *Paradise Lost* (1998), Alastair Fowler states that because "the ecliptic and equatorial planes coincide" in John Milton's prelapsarian astronomy, the cosmic "geometry of Milton's invented unfallen world is elegantly simple" (35), a view Fowler had held as early as in his 1968 edition, and similar to the position expressed earlier by Thomas Orchard (146). In our postlapsarian skies, of course, these two great circles do not coincide, for the plane of the ecliptic (roughly, the path of the sun, moon, and planets along the zodiac) lies at an angle of about 23.5 degrees to the plane of the celestial equator (i.e. equatorial plane), which intersects the earth's axis at 90 degrees. Such a complication was apparently foreign to Milton's prelapsarian universe, making the phenomena of the skies easier to imagine. Among the various simplicities that Fowler finds so "exhilaratingly easy to visualize" in that prelapsarian universe is the fact that "its sun remains constantly in the same sign" and only "as a consequence of the fall [...] begins its oblique seasonal journey" (35). Prior to God's postlapsarian command in 10.649-719 (esp. 668-78) that the sun's annual path be made oblique, 10.329 already informs us that "the Sun in *Aries* rose." Fowler tells us that this situation was consistent with the "common belief [...] [that] the world was created at the vernal equinox," and he therefore holds that the sun's zodiacal position would have been forever Aries in an unfallen universe (Fowler 201n555-61).

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Fowler's influence is far-reaching. The Indian expert on Miltonic cosmology, Malabika Sarkar, has adopted Fowler's views (see "Satan's Astronomical Journey" 418; "'The Visible Diurnal Sphere'" 3), as has the literary scholar Rudolf Beck, who accepts in passing the stated coincidence of the ecliptic and equatorial planes as authoritative (27). Likewise, the respected Milton scholar William Poole apparently agrees with Fowler on the zodiacal significance of "the coincidence of ecliptic and equatorial planes," for in *Milton and the Idea of the Fall* (2005), he approvingly quotes Fowler's entire paragraph, including the claim that the prelapsarian "sun remains constantly in the same sign" (Poole 180). At the very least, Poole does not dispute the point. Indeed, only Gábor Itzész has looked carefully into Fowler's statement on the coincidence of the ecliptic and the celestial equator and its putative implication that the sun shining down on Milton's Paradise would have remained forever in Aries if not for the Fall. Itzész finds much circumstantial evidence that the prelapsarian sun does move through the zodiac, but his argument ultimately becomes circular in drawing upon the *OED* for proof: "a year is 'the time occupied by the sun in its apparent passage through the signs of the zodiac, that is (according to modern astronomy), the period of the earth's revolution round the sun, forming a natural unit of time' (*OED* 1.)" (see Itzész, "Milton's Sun" 309; "Satan's Journey"; cf. also Donaldson, who accepts Itzész, 294-97, 307-09). Fowler's claims would thus appear to have gained some acceptance, as Itzész has noted (see "Milton's Sun" 307). Fowler himself may have considered the astronomical details so "exhilaratingly easy to visualize" that he never explicated precisely how the sun's zodiacal immobility worked in terms of prelapsarian celestial mechanics, nor did he cite any passages in Milton's *Paradise Lost* to show textual support for his claim. Let us take a closer look at the prelapsarian universe's cosmic order,² for we may find that its exact structural organization is "hard to tell" (3.575) and thereby illustrate what Peter Herman calls Milton's "Poetics of Incertitude" (see *Destabilizing Milton; "Paradise Lost"; "Whose fault"*).

Understanding Fowler

At least two clear passages can be cited in *Paradise Lost* attesting to the prelapsarian earth's perpetual spring, which could have led Fowler to his view that the prelapsarian sun would have remained forever in Aries. The clearest expression of this eternal spring occurs in Book 4, where we first encounter Paradise in an unfallen universe:

The Birds thir quire apply; aires, vernal aires,
Breathing the smell of field and grove, attune
The trembling leaves, while Universal Pan
Knit with the Graces and the Hours in dance
Led on th' Eternal Spring. (4.264-68)

Spring is twice referred to in these five lines, the second time as *eternal*. Similarly, albeit in a recently fallen universe, God commands the unfallen angels in Book 10 to cause astronomical changes so as to move the sun "from th' Equinoctial Rode" (10.672), i.e., the celestial equator, and thereby:

[...] bring in change
Of Seasons to each Clime; else had the Spring
Perpetual smil'd on Earth with vernant Flours,
Equal in Days and Nights [...]. (10.677-80)

Again, spring is twice referred to, the first time as *perpetual*. In terms of astronomy, one could readily understand that a perpetual, eternal spring on earth, with its "vernant" flowers forever swaying in its "vernal" breezes, would follow from the sun remaining constantly on "th' Equinoctial Rode" within the same zodiacal sign, "the vernal equinoctial point of Aries," as the position would be called in Milton's postlapsarian universe (Fowler 202n557-58). Fowler is nevertheless wrong to conclude that a prelapsarian sun would have remained forever in Aries.

The Problem of Seasons

1. Four Seasons?

Spring is always present in Milton's prelapsarian universe, but *not only* spring. This passage clearly states that autumn exists simultaneously with spring:

[...] Rais'd of grassie terf
Thir Table was, and mossie seats had round,
And on her ample Square from side to side
All Autumn pil'd, though Spring and Autumn here
Danc'd hand in hand. (5.391-95)

Philip C. Almond notes this passage and places Milton within a tradition that affirmed "an autumnal spring or a vernal autumn" (87). Simple reflection should confirm that autumn would be as agriculturally necessary as spring in order for Paradise to offer fruit, and since some fruits must pass through summer to ripen, one might expect that season to be dancing hand in hand with spring and autumn as well.

The summer season is in fact mentioned by the angel Raphael as he describes to Adam God's creative acts on the sixth day of the universe's creation:

At once came forth whatever creeps the ground,
Insect or Worme; those wav'd thir limber fans
For wings, and smallest Lineaments exact
In all the Liveries dect of Summers pride
With spots of Gold and Purple, azure and green
[...]. (7.475-79)

Presumably, Adam would understand what the term "summer" refers to, for even some birds are aware of the passing seasons, as Raphael also relates:

Part loosly wing the Region, part more wise
 In common, rang'd in figure wedge thir way,
 Intelligent of seasons, and set forth
 Thir Aerie Caravan high over Sea's
 Flying, and over Lands with mutual wing
 Easing thir flight; so steers the prudent Crane
 Her annual Voiage [...]. (7.425-31)

The crane is particularly singled out as making an annual voyage even though in Milton's prelapsarian Paradise, this bird has no practical need for such a migratory instinct. However, the annual character of its "Voiage" implies, among other things, a winter season.

2. On Earth?

We can now therefore count not only spring and autumn but also apparently summer and winter. Thomas H. Luxon is thus right to single out the lines "Universal Pan / Knit with the Graces and the Hours in dance / Led on th' Eternal Spring" (4.266-68) and suggest that they actually allude to more seasons than spring; he notes, "in later mythology the Horae became the four seasons" (Luxon n4.267). The two seasons of summer and winter, of course, would not have differed from prelapsarian spring and autumn in any practical sense. Only after the Fall of mankind did God order the seasons altered to "affect the Earth with cold and heat" so as "from the North to call / Decrepit Winter" and "from the South to bring / Solstitial summers heat" (10.653-56). Noticing that prelapsarian birds do not need to migrate probably leads Fowler to remark that "the references to migration are proleptic" (416n423-30). Such an explanation seems insufficient, however, since the angel Raphael is explicitly relating these things to Adam as factual details about God's creation as it already stands. In *Naming in Paradise* (1990), John Leonard understands "seasons" to mean occasions (265), but this meaning seems strained, given the context of Raphael's discourse. More recently, Leonard appears to have conceded the point and wonders in *The Complete Poems* (1998) and in his annotated *Paradise Lost* (2003) if "the prudent [...] birds sense

the imminent Fall" and therefore know that a wintry season lies ahead (809 and 388, respectively), a point he again alludes to in *Faithful Labourers* (589), but this speculation suffers the same insufficiency as Fowler's explanation.

Fowl and human were cognizant of the passing seasons, but since those seasons in Milton's prelapsarian Paradise were not distinguished by changing temperatures, what *did* announce their passing? Neither fully blossomed flowers nor fully ripened fruit did so, for "Spring and Autumn here / Danc'd hand in hand" (5.394-95). Nor was the passing of a summer season distinguished by slowly maturing fruits since fruits would have been ripening year-round. And what could possibly signal the winter season in this Paradise without death? Trees surely do not shed all their leaves in the perpetual, eternal autumn and stand bare for some equally perpetual winter season. On this point, let us also note in passing that Milton never explicitly refers to autumn as "fall" in his epic poem even though the term "fall" existed in Milton's time, when it was short for the expression "fall of the leaf" (cf. Ascham 48; Evelyn 101, 160; Walton 68; see also *OED* "fall *n.* 1.,2.). In a postlapsarian reference, he does allude to "fall of the leaf" in Book 1 of *Paradise Lost*, which describes the fallen angels lying thick as "Autumnal Leaves [...] for ever fall'n" (1.302-30). He may otherwise avoid the expression because it so readily connotes fallenness, either of angels or mankind. Be that as it may, no separate, distinct season exists for autumn, nor for any other season, and though a postlapsarian sense of the word "harvest" is thrice used (see 4.981; 9.842; 11.899), it nowhere connotes a separate season of autumn for the prelapsarian earth.

3. As in the Heavens?

Since the four seasons were not agriculturally separate on the prelapsarian earth, let us consider what Milton's references to changing seasons might mean, for example, in Eve's innocent words to Adam:

With thee conversing I forget all time,
All seasons and thir change, all please alike. (4.639-40)

One might object that Eve is using “seasons” in a different sense, referring to cycles of time other than the four seasons, but a couple of passages strongly imply that Adam and Eve’s prelapsarian earth does have alternating seasons. The first passage comes in the angel Raphael’s description of creation:

Again th’ Almightye spake: Let there be Lights
High in th’ expanse of Heaven to divide
The Day from Night; and let them be for Signes,
For Seasons, and for Dayes, and circling Years,
And let them be for Lights as I ordaine
Thir Office in the Firmament of Heav’n
To give Light on the Earth; and it was so. (7.339-45)

The second passage comes when Raphael assures Adam that he can rightfully inquire about the motions of the heavens:

To ask or search I blame thee not, for Heav’n
Is as the Book of God before thee set,
Wherein to read his wondrous Works, and learne
His Seasons, Hours, or Dayes, or Months, or Yeares
[...]. (8.66-69)

The various temporal divisions include the seasons, and their divisions are prelapsarian since Adam is assured that he can rightfully study them and thereby learn of the motions within the heavens, motions that include seasons. One might object that Genesis 1:14 stands behind 7.341-42 (and 8.69) and that the Hebrew (*mow’ed*) and Greek (*kairos*) for “season” can mean simply “appointed time” (Gesenius 417a) and “point of time” (Bauer 395b), respectively. This objection would be more relevant had Milton not explicitly noted that the celestial motions also act as signs for the “circling Years” (7.342), an allusion to the sun’s annual movement (or apparent movement) along a great celestial circle. Seasons thus may indeed have no clear

agricultural referent for the unfallen earth, but they do take place in astronomical terms, as Gábor Ittzés has also argued (see Ittzés, "Milton's Sun" 309).

Fowler Reconsidered: "ecliptic and equatorial planes coincide"

Because astronomical seasons exist for Milton's prelapsarian earth, we are led to reconsider Fowler's two astronomical statements, that "the ecliptic and equatorial planes coincide" and that the "sun remains constantly in the same sign" of Aries in the unfallen universe (35; 201n555-56); these two claims presuppose not merely a coincidence of the ecliptic and the celestial equator but also an identification of the ecliptic with the zodiac. Let us first address Fowler's former astronomical statement and return later to the latter astronomical statement. Milton allows some room for speculation that the prelapsarian "ecliptic" was already in an oblique position and that the sun (with planets in tow) merely changed course at God's command after the sin of Adam and Eve:

Some say he bid his Angels turne ascense
The Poles of Earth twice ten degrees and more
From the Suns Axle; they with labour push'd
Oblique the Centric Globe: Som say the Sun
Was bid turn Reines from th' Equinoctial Rode
Like distant breadth to *Taurus* with the Seav'n
Atlantick Sisters, and the *Spartan* Twins
Up to the *Tropic* Crab; thence down amaine
By *Leo* and the *Virgin* and the *Scales*,
As deep as *Capricorne*, to bring in change
Of Seasons to each Clime; else had the Spring
Perpetual smil'd on Earth with vernant Flours,
Equal in Days and Nights [...]. (10.668-80)

In the former of the two alternatives for the sun's oblique annual motion, Milton notes that "Some say he bid his Angels turne ascense / The Poles of Earth twice ten degrees and more / From the Suns Axle." If so, then Fowler would be correct in his claim that the zodiac (and

therefore the “ecliptic”?) lay along the celestial equator prior to the Fall, for only the earth is shifted to an oblique angle. In the latter of the two alternatives for the sun’s oblique annual motion, however, Milton notes that “Som say the Sun / Was bid turn Reines from th’ Equinoctial Rode,” as though the sun altered its (apparent) course (by which, take note, it would already have been in [apparent] annual motion along the celestial equator) and turned toward “*Taurus* with the Seav’n / *Atlantick* Sisters” and the subsequent zodiacal signs along an “ecliptic” that already existed as a circle oblique to the celestial equator. Ittzés cites this same passage in *Paradise Lost* (cf. Ittzés, “Milton’s Sun” 308), but he does not see the implication that the sun turned to take the zodiacal path, for he holds that the prelapsarian sun moves through the signs of the zodiac (cf. Ittzés, “Milton’s Sun” 309). Ittzés aside, the term “ecliptic” will require some clarification anyway, which the following three paragraphs will provide.

This latter alternative noted above, that the sun altered its (apparent) course by turning from the “Equinoctial Rode” onto the zodiac, would be consistent with the reference to prelapsarian colures in 9.66, for the colures are defined as the “two great circles which intersect each other at right angles at the poles, and divide the equinoctial [i.e., celestial equator] and the ecliptic into four equal parts” (*OED* “colure” *n.*). Ittzés has much of value to say about the colures in *Paradise Lost*, and can thus be read with interest on these, but he errs in making the colures terrestrial rather than celestial and in asserting that the celestial sphere itself is imaginary. His error stems from relying on a *modern* definition of the celestial sphere rather than the ancient and medieval view that the celestial sphere is physical (Ittzés, “Satan’s Journey” 14). Consistent with the *OED* definition provided above, the colures “intersect the plane of the ecliptic at the fixed points of the solstice[s] and equinox[es]” (Zivley 131-32). Fowler holds that this reference to the colures in 9.66 is proleptic of the Fall (472-73n64-66), whereas Ittzés suggests an infinite number of intersections since “every prelapsarian meridian is a colure” (“Satan’s Journey” 18), but this is too ingenious.

Interpreting the "ecliptic" as an abstract great circle already oblique to the celestial equator might, ironically, fit with Fowler's own description of Satan's "oblique way" (3.564) as a path from the sign of Libra to the sun in Aries (3.558, 588); this is as explicated throughout several of Fowler's notes to Book 3, lines 555 through 588 (cf. 201n555-61; 202n557-58 and 558-59), for when Satan leaves the sun, he is said to speed "Down from th' Ecliptic" (3.740). Milton does not clearly specify that Satan enters the universe in the constellation of Libra, but if Satan *does* enter there, then his "oblique way" from Libra to the sun could allude to the obliquity of the "ecliptic" along the zodiac. Such an allusion would be contrary to Fowler's claim that "the ecliptic and equatorial planes coincide." If Fowler's claim of coincidence is correct, however, then Satan could be accurately described as speeding down from the "ecliptic" in leaving the sun. But if the "ecliptic" is oblique to the celestial equator, then the sun in Aries lies on the intersection of these two great circles, and Milton's words "Down from th' Ecliptic" might be an allusion to Satan taking leave from that oblique path.

One could still defend Fowler's claim by distinguishing an "ecliptic" coincident with the celestial equator from an oblique zodiac, but Fowler does not distinguish these two (cf. 35-36). One might also object that an oblique zodiac without the sun, moon, and planets would not literally be an "ecliptic" since no eclipses could ever take place. True enough, but would eclipses take place in the prelapsarian universe described by Fowler, a universe in which the sun remains forever at the vernal equinox in the zodiacal sign of Aries? For if the sun does not move, why should the moon (or the planets)? If not, then Fowler's "ecliptic" is just as imaginary.

A Brief Excursus on Prelapsarian Astronomical Possibilities

This point about the zodiac and the ecliptic could do with some elaboration. In the prelapsarian universe of *Paradise Lost*, the sun's (apparent) path would have coincided with the celestial equator. In such a prelapsarian universe, there are two possibilities for the zodiac:

1. The zodiac is located on the celestial equator.
2. The zodiac is located on an approximately 23.5 degree obliquity to the celestial equator.

In his edition of *Paradise Lost* (1998), Alastair Fowler assumes the first of these two possibilities (35-36). Milton, however, seems to leave open either possibility, as we have seen.

As for the term “ecliptic,” so called because the solar and lunar eclipses occur along this line, Milton does use the term. However, he may be using it proleptically, for his references to the “ecliptic” are ambiguous, so there might not be any eclipses in his prelapsarian universe. Or there may be eclipses, and Milton may be using the term not proleptically, but to designate a prelapsarian actuality. There exists any one of three possibilities, with a further distinction worth noting to the second possibility:

- A. The term “ecliptic” is not used proleptically, for prelapsarian eclipses do occur, and the prelapsarian ecliptic is coincident with the celestial equator.
- B. The term “ecliptic” is used proleptically, for prelapsarian eclipses do not occur (either because the sun and moon [and planets] lack any motion other than diurnal [B-] or because they have more than merely diurnal motion that does not bring the sun or moon into eclipse [B+]), and the prelapsarian “ecliptic” is coincident with the celestial equator.
- C. The term “ecliptic” is used proleptically, for prelapsarian eclipses do not occur, and the prelapsarian “ecliptic” is not coincident with the celestial equator, but instead intersects it at about a 23.5 degree obliquity.³

Fowler seems to assume B-, for he thinks that the sun remains constantly in the vernal equinox, which implies that the moon and planets would also not exhibit any movement from their positions along the “ecliptic,” as any such movements were understood to derive from the same cosmic mechanism.⁴

If we combine number (zodiac) with letter (ecliptic), Fowler’s understanding would thus be most accurately labeled “1B-.” Note, how-

ever, that both "B-" and "B+" designate very odd uses of the term "ecliptic," for eclipses do not occur along the celestial equator, and they never will, whether in pre- or postlapsarian times. By comparison, "C" is a more reasonable use of the term "ecliptic," for eclipses will occur along the 23.5 degree obliquity in postlapsarian times. Fowler is unlikely to be correct in his position of 1B-, as we shall see, and Milton's somewhat ambiguous language leaves open seven other possibilities, i.e., 1A, 1B+, 1C, 2A, 2B-, 2B+, or 2C (though 2B- suffers a similar difficulty as 1B-).⁵

Fowler Reconsidered: "sun remains constantly in the same sign"

Even if Fowler were correct in maintaining that "the ecliptic and equatorial planes coincide" and in assuming that the "ecliptic" and the zodiac are identical (1B- above), there seems no reason to infer that the prelapsarian "sun remains constantly in the same sign" of Aries. One would have to interpret "th' Equinoctial Rode" of 10.672 as implying that the sun does not move from the vernal equinox in which it was created, but such a reading is belied by the fact that the sun is turning its reins from a road, and a road, moreover, in which every point along its entire circuit would be equinoctial. Perhaps Fowler thinks to infer the sun's vernal immobility in Aries from the apparent fact that the cosmic "geometry of Milton's invented unfallen world is elegantly simple" (35). The simplest elegance could only be the case for a geocentric universe, which at its unfallen simplest could conceivably make do with purely diurnal movement of the heavens. But Milton allows for a heliocentric understanding of the universe, which would require not only a diurnal rotation of the earth but also an annual revolution of the earth around the sun. In that case, the starry sphere would have to keep pace with the earth's annual motion to ensure that the sun remain forever in Aries, though this is also conceivable if the source of their annual movement is identical.

At any rate, simple elegance need not necessitate the single, diurnal motion possible only with geocentrism, as Milton's poem allows for a heliocentric understanding. Besides, even a geocentric reading of Milton's prelapsarian universe entails more than just diurnal movement. In 8.84, Raphael's reference to "Epicycle" (among other celestial mechanisms) presupposes the annual motion of the planets, even if the angel's point is to rein in mankind's overweening drive for total knowledge (cf. Orchard 100-01), and planetary annual motion implies the sun's (apparent) annual motion as well. Moreover, we have already seen that the celestial lights were created for the purpose of measuring out the passage of time, including the passing of the seasons and the "circling Years" (7.341; see also 7.339-45), which would be impossible if the sun were never to move out of Aries. Without the sun's (at least apparent) movement from place to place along the celestial equator in Milton's unfallen universe, nothing would distinguish seasons since no changes on earth announce their passage (Itzès, "Milton's Sun" 309). Admittedly, a prelapsarian universe in which the sun's annual movement does not take it along a path oblique to the celestial equator is a universe in which there is no *decisively* rational division into merely four seasons. With respect to the stars, the sun's annual motion could in principle allow for twelve, or thirty-six, or three-hundred and sixty seasons. But perhaps Adam and Eve are as "Intelligent of seasons" (7.427) as the crane and happen to have an intuitive recognition of four seasons corresponding to heavenly motions (cf. 9.66: "Colure").

We have seen that the poem speaks of spring and autumn (5.394-95). The angel Raphael's reference to summer presupposes that Adam understands that term (7.478). This same angel's description of migratory birds being "Intelligent of seasons" presupposes at least some indefinite concept of winter on Adam's part as well (7.427; cf. Itzès, "Milton's Sun" 309). Even if the first couple should have no clear concept of what the four seasons might entail, there would nevertheless be astronomically announced signs "For Seasons, and for [...] circling Years" (7.342), and the sun would certainly move out of Aries.

Conclusion

The structure of Milton's prelapsarian universe is often alluded to in *Paradise Lost*, but its *precise* structural organization, as Milton himself hints, is "hard to tell" (3.575); this allows for several interpretative possibilities and is thereby reminiscent of the ambiguity and incertitude investigated by Herman and other scholars (cf. Sauer 15n1). Alastair Fowler thus makes overly confident statements concerning the simple elegance of Milton's universe, including two strong claims, that "the ecliptic and equatorial planes coincide" and that the prelapsarian "sun remains constantly in the same sign" of Aries. As we have seen, the first statement might well be correct, though not incontestably so (and not as Fowler means it), given the ambiguity of Milton's language concerning the "ecliptic" and the zodiac. The second statement, however, is demonstrably incorrect, for the celestial motions that signal the changing seasons in their "circling Years" entail that the prelapsarian sun move annually about the celestial equator (along with the planets, presumably). The sun could not remain constantly in Aries, or the term "seasons" would have no astronomical referent (though reading the celestial motions might require an intuitive intelligence of seasons). One might note, however, that a sense exists in which Fowler is right, for Milton's prelapsarian sun does not move out of Aries. If Fowler's reckoning is correct, then God's creation of the sun occurs on the 17th day from the Messiah's generation (31). Fowler reads Milton as holding to the "common belief [...] [that] the world was created at the vernal equinox" (201n555-56; 235n268). Since, by Fowler's calculation, the Fall occurs on the 32nd day from the Messiah's generation (see 31), then the disturbance of the heavenly spheres to cause the sun's oblique annual motion would occur 15 days from the time of the sun's creation, just as it would have been about to leave the sign of Aries (assuming that the equinox fell in the center of Aries). Fowler is thus right to claim that the prelapsarian "sun remains constantly in the same sign," but the irony is that the

saving of this phenomenon is due only to the timing of the Fall, a minor *felix culpa* for his scholarly position.

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NOTES

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²Fowler refers to Milton's "invented unfallen *world*" (italics mine) perhaps because of the expression "This pendant world" (2.1052). However, the term "Universe" is more commonly used by Milton: 3.584, 3.721, 7.227, and 8.360. This paper will therefore use the term "universe" to refer to the structure contained by the *primum mobile* (cf. Fowler 201n555-61). For an adjective referring to the orderly structure of Milton's universe, this paper will use the term "cosmic" since "universal" has a connotation that is too inclusive.

³One could also distinguish a C- from a C+ parallel to the distinction between B- and B+, but such a complication is not significant to the specific argument being made here.

⁴Such would certainly be the case for the Ptolemaic system, where more than diurnal motion of sun, moon, and planets results from their slight diurnal lag, so if the sun exhibits no lag, why should any other celestial object? The Copernican case would be somewhat more complicated, for the moon's orbit is centered on the earth, but the motive power is the sun (3.582-83: "turn'd / By his magnetic beam"); if the sun and planets have no apparent motion other than diurnal, why should the moon have any apparent motion other than diurnal? Moreover, Milton's poem is ambiguous between geo- and heliocentrism; so apparent, observable phenomena in the heavens should not distinguish them. Of course, this is all purely academic, for Fowler's reading is incorrect: the sun (as we have seen) does exhibit more than diurnal movement, along with the moon and planets.

⁵These various arrangements of ecliptic and zodiac are to differing degrees each a possible (or perhaps impossible) structure in Milton's prelapsarian universe, thereby offering the sort of structural uncertainty that makes Satan's movement into the universe, whether "up or downe / By center, or eccentric, hard to tell" (3.574-75), a series of oppositions reminiscent of Herman's identification of a "Poetics of Incertitude" in the Miltonic "Or." Moreover, these structural possibilities are not purely innocent alternatives, for some entail God's prelapsarian preparation for a postlapsarian universe, an issue of the sort that "deeply compli-

cates the question of blame in *Paradise Lost*" (Herman, "'Whose fault'" 49). This particular aside, however, cannot sufficiently deal with that larger issue, so let us return to the lesser issue at hand: Fowler's views.

WORKS CITED

- Almond, Philip C. *Adam and Eve in Seventeenth-Century Thought*. Cambridge: CUP, 1999.
- Ascham, Roger. *Toxophilus*. 1545. London: Southgate, 1868.
- Bauer, Walter. *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*. Ed. William F. Arndt and F. Wilbur Gingrich. Chicago: U of Chicago P, 1957.
- Beck, Rudolf. "'The Region of Beauty and Delight': Walton's Polar Fantasies in Mary Shelley's *Frankenstein*." *Keats-Shelley Journal* 49 (2000): 24-29.
- Donaldson, Meredith Jane. *Moveable Text: Mutability, Monumentality, and the Representation of Motion in British Renaissance Literature*. Diss. McGill University, 2010. *Digitool / McGill*. <http://digitool.library.mcgill.ca/R/?func=dbin-jump-full&object_id=96729&local_base=GEN01-MCG02>. 25 Nov. 2014.
- Evelyn, John. *Sylva: A Discourse of Forest Trees and the Propagation of Timber*. 1664. Teddington, Middlesex: Echo Library, 2009.
- Fowler, Alastair, ed. Introduction. *John Milton: Paradise Lost*. 2nd ed. New York: Longman, 1998. 1-48.
- Gesenius, Wilhelm. *A Hebrew and English Lexicon of the Old Testament*. Ed. Francis Brown, S. R. Driver, and Charles A. Briggs. Oxford: Clarendon P, 1951.
- Herman, Peter C. *Destabilizing Milton: Paradise Lost and the Poetics of Incertitude*. New York: Palgrave Macmillan, 2005.
- . "Paradise Lost, the Miltonic 'Or,' and the Poetics of Incertitude." *SEL* 43.1 (Winter 2003): 181-211.
- . "'Whose fault, whose but his own?': *Paradise Lost*, Contributory Negligence, and the Problem of Cause." *The New Milton Criticism*. Ed. Peter C. Herman and Elizabeth Sauer. Cambridge: CUP, 2012. 49-67.
- Ittzés, Gábor. "Milton's Sun in the Zodiac." *Notes and Queries* 52.3 (September 2005): 307-10.
- . "Satan's Journey Through Darkness: *Paradise Lost* 9.53-86." *Milton Quarterly* 41.1 (March 2007): 12-21.
- Leonard, John, ed. *Faithful Labourers: A Reception History of Paradise Lost, 1667-1970*. 2 vols. Oxford: OUP, 2013.
- . *Naming in Paradise: Milton and the Language of Adam and Eve*. Oxford: Clarendon P, 1990.
- Luxon, Thomas H., ed. *The Milton Reading Room*. Dartmouth College, 1997. <<http://www.dartmouth.edu/~milton>>. 27 Nov. 2014.
- Milton, John. *Paradise Lost*. Ed. Alastair Fowler. 2nd ed. New York: Longman, 1998.

- . *Paradise Lost*. Ed. John Leonard. London: Penguin, 2003.
- . *The Complete Poems*. Ed. John Leonard. London: Penguin, 1998.
- Orchard, Thomas N. *The Astronomy of Milton's Paradise Lost*. London: Longmans, Green, and Co., 1896. *Project Gutenberg*.
<http://www.gutenberg.org/files/28434/28434-h/28434-h.htm>>. 27 Nov. 2014.
- Poole, William. *Milton and the Idea of the Fall*. Cambridge: CUP, 2005.
- Sarkar, Malabika. "Satan's Astronomical Journey, *Paradise Lost* IX.63-66." *Notes and Queries* 26.5 (1979): 417-22.
- . "'The Visible Diurnal Sphere': Astronomical Images of Space and Time in *Paradise Lost*." *Milton Quarterly* 18.1 (1984): 1-5.
- Sauer, Elizabeth, ed. "Introduction: The Art of Criticism." *Milton and the Climates of Reading: Essays by Balachandra Rajan*. Toronto: U Toronto P, 2006. 3-16.
- Walton, Izaak. *The Compleat Angler: or, the Contemplative Man's Recreation*. London: T. Maxey, 1653.
- Zivley, Sherry Lutz. "Satan in Orbit: *Paradise Lost*: IX: 48-86." *Milton Quarterly* 31.4 (1997): 130-36.

Milton's Astronomy and the Seasons of Paradise: Queries Motivated by Alastair Fowler's Views¹ . By Hodges, Horace Jeffery. Read preview. Likewise, the respected Milton scholar William Poole apparently agrees with Fowler on the zodiacal significance of "the coincidence of ecliptic and equatorial planes," for in *Milton and the Idea of the Fall* (2005), he approvingly quotes Fowler's entire paragraph, including the claim that the prelapsarian "sun remains constantly in the same sign" (Poole 180). Indeed, only Gabor Itz has looked carefully into Fowler's statement on the coincidence of the ecliptic and the celestial equator and its putative implication that the sun shining down on Milton's Paradise would have remained forever in Aries if not for the Fall.