

# William Cowper and the Age of the Earth

## by Charles Petzold

In Shakespeare's *As You Like It*, Rosalind remarks that "the poore world is almost six thousand yeeres old" (Act IV, Scene 1), and few attendees of the play's first performances in the early 1600's would have disagreed. Six thousand years is the approximate timespan of earth's history derived from the ages and progeny of Biblical figures following the act of Creation recorded in the book of Genesis. The first five books of the Hebrew Bible were traditionally attributed to the authorship of Moses under divine influence, so they were highly trusted as historical documents.

By the time of Charles Darwin's *Origin of Species* in 1859, the earth had become much older — an unfathomable millions and perhaps billions of years. A revolution had occurred as significant as the earlier Copernican revolution that displaced earth from the center of the universe. This latter revolution is sometimes called a revolution in *time*, or the *chronological* revolution, or a discovery (in John McPhee's phrase) of *deep time* as an analog to deep space. This was primarily a geological revolution with input from the fields of zoology and paleontology. It began with the study of geological strata and incorporated the study of fossils that revealed a succession of different ages of the earth in which various species thrived and then became extinct.

The Copernican Revolution can be conveniently dated: It began with the publication of Nicolaus Copernicus's *De revolutionibus orbium coelestium* in 1543 and was effectively concluded with the publication of Isaac Newton's *Philosophiæ Naturalis Principia Mathematica* in 1687. Some of the participants in this revolution, such as Galileo Galilei, are household names.

The geological revolution is much vaguer. Some of the major figures — Buffon, James Hutton, Georges Cuvier, William Smith, Charles Lyell — might be familiar, but they are hardly household names. Assigning a date to this revolution is almost impossible, particularly considering that substantial fractions of the general population have never accepted the revolution at all!

Early explorations of the earth tended to confirm scripture rather than refute it. Books by Nicholas Steno in 1669 and John Woodward in 1695 interpreted the earth's layers of strata as remnants of the Deluge described in Genesis chapters 6 through 9. Over the 18<sup>th</sup> century, however, closer examination of the strata revealed characteristics and anomalies that simply could not be explained in terms of traditional biblical narratives and timespans.

That's when it began to seem as if the geologists' hammers were also chipping away at the foundations of Christian faith.

What was the turning point? When did the tap-tap-tap of those subversive hammers become loud enough for ordinary people to hear? Even more metaphorically, when did the Genesis canary die in the coal mine of geological exploration?

One interesting possibility is the year 1785. That year has significance in conventional histories of geology, but it also marks a more unusual milestone: That's the year that an English evangelical poet sounded an alarm from the depths of an epic poem. The poem was called *The Task*, and the poet was William Cowper (pronounced "cooper"):

Some drill and bore  
The solid earth, and from the strata there  
Extract a register, by which we learn,  
That he who made it, and revealed its date  
To Moses, was mistaken in its age.

Sometimes when this passage is quoted, the "he" is capitalized, but it's not in the first edition,<sup>1</sup> and yet there's no mistaking that the pronoun refers to God, who obviously could not (in Cowper's coyly ironic verse) have been mistaken in conveying the earth's history and age to Moses. Cowper's verse actually mocks the apostates, but not without his characteristic wit.

"His poems are not much read now," lamented a biography of William Cowper,<sup>2</sup> and that was in 1929! Yet Cowper was quite famous in his own time, and for years following his death in 1800. He was Jane Austen's favorite poet: In *Sense and Sensibility* (1811), Marianne Dashwood is furious when sister Elinor's new beau recites Cowper's poetry with a "dreadful indifference" (Vol. I, Ch. 3). In *Mansfield Park* (1814), Fanny Price quotes Cowper to protest the cutting down of oak trees (Vol. I, Ch. 6), and again to express her homesickness (Vol. III, Ch. 14). In *Emma* (1815), it's George Knightley who recollects the Cowper line "myself creating what I saw" (Vol. III, Ch. 5) about fabricating visions while gazing into a fire.

In the 1960s, Martin Luther King Jr. sometimes quoted "The Negro's Complaint," one of several poems that Cowper wrote in 1788 in support of the abolition of slavery:

Fleecy locks, and black complexion  
Cannot forfeit nature's claim;  
Skins may differ, but affection  
Dwells in white and black the same.<sup>3</sup>

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<sup>1</sup> William Cowper, *The Task, a Poem, in Six Books* (London: J. Johnson, 1785), p. 99.

<sup>2</sup> Lord David Cecil, *The Stricken Deer, or the Life of Cowper* (London: Constable & Co, 1929), p. 12

<sup>3</sup> William Cowper, "The Negro's Complaint," lines 13–16. The standard edition of Cowper's poetry is William Cowper, *Poetical Works*, 4<sup>th</sup> edition, ed. H. S. Milford (Oxford University Press, 1934, reprinted with revisions, 1967).

A few of Cowper's verses are still familiar quotables, such as "God made the country, and man made the town"<sup>4</sup> and "Variety's the very spice of life / That gives it all its flavor"<sup>5</sup> and:

God moves in a mysterious way,  
His wonders to perform;  
He plants his footsteps in the sea,  
And rides upon the storm.<sup>6</sup>

That's from a collection called *Olney Hymns*, published in 1779, to which Cowper contributed 66 hymns. Cowper's friend John Newton wrote the other 282, including the most famous of the lot:

Amazing grace! (how sweet the sound)  
That sav'd a wretch like me!  
I once was lost, but now am found,  
Was blind, but now I see.<sup>7</sup>

Only the words appear in *Olney Hymns*. It was set to music much later.

John Newton was a former captain of slave ships. During a bad storm at sea in 1748, he experienced a religious awakening, although he continued to pilot slave ships for several more years. After retiring from the seafaring and slave-trading life, Newton was ordained in the Anglican church, and became curate of Olney. That's where he met Cowper in 1767.<sup>8</sup>

Cowper, then in his mid-30s, had converted to an Evangelical Anglicanism just a couple years earlier after a particularly harrowing stretch of deep depression and self-loathing, during which he became convinced that God hated him. Cowper tried to kill himself with laudanum, a knife, and hanging, and then realized that by attempting suicide, he had committed unpardonable sins.<sup>9</sup> During another depressive spell ten years later, Cowper had a dream where he heard the words "Actum est de te, periisti" — "It is all over with thee, thou hast perished" — which he interpreted as meaning that he was not among the predestined elect of his Calvinist God.<sup>10</sup>

Cowper is often categorized as an evangelical poet, but as someone who felt himself damned and despised by God, he doesn't fit any of our common conceptions. What kind of

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<sup>4</sup> William Cowper, *The Task*, Bk. I, Line 749.

<sup>5</sup> William Cowper, *The Task*, Bk. II, Line 606.

<sup>6</sup> William Cowper, "Light Shining Out of Darkness," Lines 1–4.

<sup>7</sup> [Olney Hymns, in Three Books](#) (London: W. Oliver, 1779), p. 53. Cowper's is on page 328.

<sup>8</sup> James King, *William Cowper: A Biography* (Durham: Duke University Press, 1986), pp. 65–66.

<sup>9</sup> King, *Cowper*, pp. 45–47.

<sup>10</sup> King, *Cowper*, p. 87.

evangelical doesn't go to church or pray before meals because he feels that God rejects his devotion?<sup>11</sup>

Yet, the anguish and depression that plagued Cowper didn't result in gloomy or despondent poetry. Sometimes the alienation is hidden in metaphor, usually involving stormy seas and shipwrecks, such in "The Castaway," the last poem he wrote before his death in 1800. But often his poetry has a genteel and humorous touch.

This is what George Eliot liked about William Cowper. Before she was a novelist, Mary Ann Evans wrote an extended takedown of poet Edward Young,<sup>12</sup> best known for the long poem *Night-Thoughts*. Towards the end, she contrasts Young with the "easy, graceful melody of Cowper's blank verse."

On some grounds, we might have expected a more morbid view of things from Cowper than from Young. Cowper's religion was dogmatically the more gloomy, for he was a Calvinist ... There was real and deep sadness in Cowper's personal lot ... Yet, see what a lovely, sympathetic nature manifests itself in spite of creed and circumstance! Where is the poem that surpasses *The Task* in the genuine love it breathes, at once towards inanimate and animate existence — in truthfulness of perception and sincerity of presentation — in the calm gladness that springs from a delight in object for their own sake, without self-reference — in divine sympathy with the lowliest pleasures, with the most short-lived capacity for pain? (pages 21 – 22)

Miss Evans mentions *The Task*. Published in 1785, this is Cowper's masterpiece: 5,000 lines in six parts, but with a decidedly humble origin. In 1783, when Cowper was in his early fifties, a Lady Austen, one of Cowper's friends and admirers, suggested that he write a poem in blank verse, a form of which she was fond. When he puzzled about the subject matter, she apparently indicated the object either he or she was sitting on — the sofa.

Two years later, the assigned task was completed, and *The Task* was published. It begins in mock-heroic style by extolling the virtues of the sofa:

I sing the Sofa. I, who lately sang  
Truth, Hope and Charity, and touch'd with awe  
The solemn chords, and with a trembling hand,  
Escap'd with pain from that advent'rous flight,  
Now seek repose upon an humbler theme;

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<sup>11</sup> Gilbert Thomas, *William Cowper and the Eighteenth Century* (London: Ivor Nicholson and Watson, 1935), p. 248. Cecil, *Stricken Deer*, p. 177.

<sup>12</sup> "Worldliness and Other-Worldliness: The Poet Young," *The Westminster Review*, [Vol. LXVII, No. CXXXI], New Series: Vol. XI, No. 1 (Jan. 1857), [pp. 1–23](#).

The theme though humble, yet august and proud  
Th' occasion — for the fair commands the song.<sup>13</sup>

After a facetious history of other more primitive seating arrangements, *The Task* leaves the reclining postures of the sitting room and moves to Cowper's natural milieu: the country outdoors. Throughout *The Task*, country walks function as springboards for more personal and spiritual ruminations. One Cowper scholar calls *The Task* the "first significant autobiographical narrative poem in the English language,"<sup>14</sup> forming a literary link between Milton's *Paradise Lost* (which Cowper read at the age of 14<sup>15</sup>) and William Wordsworth's *The Prelude* (1805).

Between his rhapsodies on nature and God, Cowper finds plenty of shortcomings in the modern world. *The Task* speaks out against war, slavery, the exploitation of India, cruelty to animals, despots, and monarchies (except when balanced by Whig constraints, of course). He laments how the present age has sunk far into impiety and violence, idleness and artificiality, frivolity and immorality, and he looks forward to the Second Coming. Like Shakespeare, Cowper explicitly cites the six thousand years assumed to have passed since Creation:

The time of rest, the promis'd sabbath comes.  
Six thousand years of sorrow have well-nigh  
Fulfill'd their tardy and disastrous course  
Over a sinful world.<sup>16</sup>

Yet, *The Task* is more than counterbalanced by the pleasures that Cowper finds in the simple joys of life. He calls domestic happiness "thou only bliss / Of paradise that has survived the fall!"<sup>17</sup> He loves gardening and the greenhouse, and the gentle comforts of warmth and togetherness:

Now stir the fire, and close the shutters fast,  
Let fall the curtains, wheel the sofa round,  
And while the bubbling and loud-hissing urn  
Throws up a steamy column, and the cups  
That cheer but not inebriate, wait on each,  
So let us welcome peaceful evening in.<sup>18</sup>

*The Task* is not an angry poem. Stern and scolding, yes, but not angry.

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<sup>13</sup> William Cowper, *The Task*, Book 1. Lines 1–7. An annotated version of *The Task* is available as William Cowper, *The Task and Selected Other Poems*, ed. James Sambrook (London: Longman, 1994).

<sup>14</sup> King, *Cowper*, p. 155.

<sup>15</sup> Charles Ryskamp, *William Cowper of the Inner Temple, Esq.: A Study of His Life and Works to the Year 1768* (Cambridge University Press, 1959), p. 57.

<sup>16</sup> Cowper, *The Task*, Book VI, lines 733–6.

<sup>17</sup> Cowper, *The Task*, Book III, Lines 41–42.

<sup>18</sup> Cowper, *The Task*, Book IV, Lines 36–41,

Book III of *The Task*, called “The Garden,” begins with Cowper’s most famous and intimate image. He alludes to his mental illness by portraying himself as a wounded suffering deer that finds solace in Christ:

I was a stricken deer that left the herd  
 Long since; with many an arrow deep infixt  
 My panting side was charg’d when I withdrew  
 To seek a tranquil death in distant shades.  
 There was I found by one who had himself  
 Been hurt by th’ archers. In his side he bore  
 And in his hands and feet the cruel scars.  
 With gentle force soliciting the darts  
 He drew them forth, and heal’d and bade me live.<sup>19</sup>

Like a longtime drunk who’s just gotten sober, the poet perceives the world with clearer eyes and finds fault with much of what he sees: vanity in earthly occupations, people living dreams and delusions, writers chronicling inconsequential histories and distorted biographical portraits. And then —

Some drill and bore  
 The solid earth, and from the strata there  
 Extract a register, by which we learn  
 That he who made it and reveal’d its date  
 To Moses, was mistaken in its age.<sup>20</sup>

It is at this point that the modern reader pulls up with a start and checks the publication date of *The Task* to find that it is indeed 1785. Even to people familiar with the history of geology, the 1785 date seems somewhat early for such worry. Cowper’s panic is a little too prescient. What’s most interesting is the very specific reference to geological strata. We wonder: Who exactly are those people in 1785 drilling and boring through strata to assign an age to the earth that exceeds six thousand years, and how did Cowper learn about them?

Cowper doesn’t seem to have known any of them personally. He instead derived much of his knowledge of geology and other scientific subjects in a very modern way: He read a lot of magazines.

When the English law that regulated the printing presses was allowed to lapse in 1695, the English press blossomed. Periodicals as well as books exerted a powerful influence over intellectual life in the eighteenth century. Monthly and quarterly publications in particular presented a spectrum of political perspectives. They kept their readers informed as well as functioning as guardians of propriety to alert them to dangerous trends.

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<sup>19</sup> Cowper, *The Task*, Book III, lines 108–116.

<sup>20</sup> Cowper, *The Task*, Book III, lines 150–4.

As a PhD thesis on Cowper and science explains, “There is little doubt that Cowper is a good example of what the middle-class Englishman might learn from an intelligent reading of the publications readily available to him.”<sup>21</sup> Cowper’s favorite was *The Monthly Review*, which began publication in 1749 and lasted for nearly a century. Each issue contained about 80 pages of dense text, mostly long book reviews of sufficient depth that a reader could easily pretend to have read the actual book. Cowper’s library contained bound volumes of *The Monthly Review*,<sup>22</sup> and a comparison between Cowper’s views and those of the magazine reveals that Cowper “condemns what the magazine condemns, praises what it praises.”<sup>23</sup>

During the decade prior to writing *The Task*, Cowper might have encountered several book reviews in *The Monthly Review* that would have given him concerns about the universal acceptance of Genesis. If Cowper was reading these reviews, so were many others. Most importantly, these reviews can give us a snapshot of the emerging geological evidence of the last quarter of the 18<sup>th</sup> century, and how it was reported to the literate public.

The July 1773 issue of *The Monthly Review* (one of the issues in Cowper’s library) includes a review of *A Tour through Sicily and Malta*, a travelogue in the form of letters by Scottish traveler Patrick Brydone.<sup>24</sup> This book seems innocent enough, but it contains a hidden explosive.

The anonymous reviewer spends almost two of the review’s twelve pages on the book’s discussion of the ancient and still active volcano of Mount Etna (spelled *Ætna* in the review). In his travelogue, Brydone writes of meeting a Roman Catholic canon named Giuseppe Recupero, who had devoted himself to a study of Etna for a book on its natural history. Yet, this research was unsettling to the devout canon, for he was becoming convinced that Etna had been spewing lava much longer than the earth was believed to exist.

One prominent flow of lava “covered with very scanty soil” (page 27) appeared to Brydone to be only a few years old, but Recupero had established that it dated from the time of the Second Punic War some 2,000 years earlier. A pit sunk nearby had pierced through seven layers of lava that had flowed from Etna during its history, each of them separated by “a thick bed of fine rich earth” (page 28). If over two millennia are required before lava is covered with soil in which vegetation can grow, then these seven layers suggested an age of at least 14,000 years. The reviewer writes:

This circumstance, added to the inferences that may have been drawn from many other appearances in Nature, strongly tends to subvert all our common

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<sup>21</sup> Harry Peter Kroitor, *William Cowper and Science in the Eighteenth Century*, PhD thesis (University of Maryland, 1957), p. 137.

<sup>22</sup> Sir Geoffrey Keynes, “The Library of William Cowper,” *Transactions of the Cambridge Bibliographical Society*, Vol. III, Part I (1959), p. 68.

<sup>23</sup> Kroitor, *William Cowper and Science*, p. 193.

<sup>24</sup> *The Monthly Review; or, Literary Journal*, Vol. XLIX (July 1773), [pp. 22–33](#).

received notions of chronology, and the age of the world. The Canon Recupero, it seems, not having the fear of the inquisition before his eyes, and forgetful of the fate of his philosophical predecessor, poor old Galileo, has made use of his observations on the several *strata of lavas*, to prove the antiquity of the eruptions of Ætna.... This inference, however, we find, has, at last, exceedingly embarrassed poor Recupero; who confided to Mr. Brydone, that, in writing the History of Ætna, he found Moses hanging like a *dead weight* upon him, and blunting all his zeal for inquiry. (pages 28 and 29)

Recupero's "strenuously orthodox" Bishop "has already warned the Canon to be upon his guard; and not pretend to be a better natural historian than Moses" (page 29).

The reviewer of Brydone's travelogue wonders if Canon Recupero's book will ever be published, and if the Canon will suffer repercussions:

So, what will become of the book, or of its author, if he dare to publish it, is, to us, matter of *fearful expectation* rather than of *hope*: although we should sincerely rejoice to have an opportunity of reading so curious a disquisition. (page 29)

It turned out that Giuseppe Recupero worked on his book on Etna until his death in 1778, but the book wasn't published until 1815 when the antiquity of the volcano wasn't nearly so subversive as Brydone's disclosure 40 years earlier.<sup>25</sup>

The review of Brydone's travelogue has all the elements present in Cowper's 4½ lines of verse: strata that had been drilled and bored to apparently reveal an age that exceeds 6,000 years, and anxiety about contradicting the word of Moses. It is entirely plausible that this tale was vivid enough for Cowper to recall some 10 years later while writing *The Task*. Moreover (as you'll see), Cowper would have been reminded of this review several times over the next five and a half years.

In *The Task*, immediately after chiding the drillers and borers who put the chronology of Moses in doubt, Cowper takes on the more speculative natural philosophers who dare to theorize how the stars and planets might have come to exist and take their place in the universe:

Some more acute and more industrious still  
 Contrive creation. Travel nature up  
 To the sharp peak of her sublimest height,  
 And tell us whence the stars. Why some are fixt,  
 And planetary some. What gave them first  
 Rotation, from what fountain flow'd their light.<sup>26</sup>

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<sup>25</sup> Martin J.S. Rudwick, *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution* (University of Chicago Press, 2005), pp. 120–122.

<sup>26</sup> William Cowper, *The Task*, lines 155–160.



This sort of speculation was considered just as dangerous as dating the strata because it casts doubt on the veracity of the literal interpretation of the Creation given in the first book of Genesis.

Attempts to “contrive creation” date from the late 17<sup>th</sup> century by theologians with an interest in natural philosophy. Thomas Burnet’s *Sacred Theory of the Earth* (1681) describes a smooth and featureless earth without mountains or seas during the time of Paradise. Such an earth is easily flooded by waters of the Deluge that emerge from below the surface, but in the process, the earth is wrecked and torn apart into the ruins of mountains and seas that we see today. William Whiston’s *A New Theory of the Earth* (1696) describes how the earth was formed from a comet, how another comet throws the earth off kilter and causes tides that become the Deluge, and how a third comet will disrupt the earth’s orbit so that it begins descending into the sun to initiate the final conflagration. These were works of religious cosmogony, in which the events in Genesis were realized by natural law and processes.

It’s more likely that Cowper is thinking of a more recent theorist, the Count de Buffon, the indefatigable natural historian who wrote and published some 36 volumes of his *Histoire Naturelle* between 1749 and his death in 1788 on the eve of the French Revolution. Much of Buffon’s work is based solely on observation and categorization, and for this he was universally admired. But Buffon also delved into the speculative, and that’s where he ran into trouble with the monitors of orthodoxy.

Twice a year, the *Monthly Review* published an Appendix that reviewed books and articles published in languages other than English. In 1775, William Cowper might have read a review of a new supplement of Buffon’s *Histoire Naturelle*.<sup>27</sup> (This is another issue that is known to have been in Cowper’s library.) On the first page the reviewer mentions “the Author’s loose, and even licentious mode of philosophizing on certain occasions” (page 610) and later reminds the reader of the very first volume of *Histoire Naturelle* (published in 1749), which presented Buffon’s history and theory of the earth and other planets. The reviewer’s derision comes through loud and clear:

Those who have read the first volume of the Author’s *Natural History* will perhaps recollect his singular theory of the formation of the Earth, and of the other primary, and secondary planets. He there supposes them to have been fragments of the sun’s body, driven off from it by the shock of a comet. This bold and gratuitous supposition is the ground-work of the present edifice.  
(page 617)

This was the kind of speculation that enraged the orthodox. Why would God need to send a comet into the sun to dislodge molten chunks when he could simply create the planets by fiat? But they knew the answer: The action of a comet rather than straightforward miracle was an attempt by the materialists and deists to reduce God’s direct influence over the world and attribute everything to the secondary causes of natural law.

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<sup>27</sup> *The Monthly Review; or, Literary Journal*, Vol. LII Appendix (1775), [pp. 610–618](#).

Because these rotating chunks of dislodged sun are initially in a liquid state, gravity causes them to coalesce into oblate spheroids, but they need to cool down and solidify before they can support life. The idea that the earth is a cooling sphere became more plausible when Jean-Jacques d'Ortous de Mairan demonstrated that the earth is much warmer than it would be if the sole source of heat were the sun. It is therefore likely that the earth is warmed from an internal heat source.<sup>28</sup>

In the supplement under review, Buffon presents experimental results of the cooling properties of molten iron and other materials, and then uses those to determine how long a molten earth would need to exist before it became cool enough for life, and then how long it could exist before becoming “bound up in everlasting frost” (as the reviewer phrases it):

Mr. de Buffon informs us that it circulated round the sun during the space of 34,770 years and *a half*, before it was cool enough to be touched without burning the fingers: — that it was reduced nearly to its present temperature in the space of 74,832 years from its first formation: — that however it became habitable some centuries after the period of 34,770 years and a half abovementioned; and consequently that it may have been inhabited 40,062 years; and may continue to support its animal and vegetable guests till the year 168,123, that is to say, during a space of 93,291 years, reckoning from the present year. (page 615)

Similar calculations are cited for the Moon and planets.

Nobody knew at the time how Buffon had struggled with these calculations and the assumptions at their basis. At one point he had decided that “it was probably necessary to assign the earth a probable age of at least ten million years.”<sup>29</sup>

Ten million years! Still, the numbers Buffon did publish are considerably longer than 6,000 years, and the reviewer is skeptical about how living things fare as the earth changes temperature. Buffon also seems oblivious to religious concerns:

With respect to certain obvious objections of a different nature, such as might be made to the Author's theory and *chronology* of the Earth, by the doctors of the Sorbonne, for instance, or the members of any other Christian community, he observes a profound silence. (page 618)

The mention by the reviewer to the “doctors of the Sorbonne” is a reference to disputes that occurred when the first volumes of Buffon's *Histoire Naturelle* appeared in 1749. Certain religious factions in France had objections to the book, including (but not limited to) the theory that the earth and planets were formed from a comet hitting the sun. The Sorbonne, which was the Faculty of Theology of Paris, was then compelled to obtain a

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<sup>28</sup> De Mairan's findings were reviewed in *The Monthly Review; or, Literary Journal*, Vol. XLI Appendix (1769), pp. 503–508.

<sup>29</sup> Jacques Roger, *Buffon: A Life in Natural History*, trans. Sarah Lucille Bonnefoi (Ithaca: Cornell University Press, 1997), p. 411.

retraction from Buffon, which they did. His apology included a statement that he presented his theory “only as a pure philosophical supposition,” or as he said later in private, “It is better to be humble than hung.”<sup>30</sup>

The reviewer then mentions the review two years earlier of Brydon’s travelogue:

The Canon Recupero, who was likewise led, by his inquiries into the phenomenon of Mount Ætna, considerably to extend the age of the earth, found himself checked in his flights, by Moses, hanging as a *dead weight* upon him. M. Buffon nowhere appears to feel this clog, nor does he attempt any reconciliation with Moses, or with the prophets, with regard either to the origin of the world, or its final catastrophe. (page 618)

Earlier theories of the earth by Burnet and Whiston had predicted its destruction in a conflagration in accordance with the Book of Revelation. Because Buffon considers the earth to be a cooling globe, he believes that it will eventually cool to a point where it is no longer habitable. Here’s how the reviewer humorously sums up that destiny:

This goodly frame of things, instead of being consumed by fire, tends, according to the present Theory, by slow degrees, to a very different consummation! — and our venerable Mother Earth, instead of suddenly going off in a *burning fever*, must, in a certain number of years [— you may soon calculate the matter from the Author’s *data*] die absolutely *frost-bitten*, at the end of a lingering and yearly increasing *ague-fit*. (page 618)

Cowper didn’t need to read reviews of works of natural history to learn about Canon Recupero, Etna, and Moses hanging like a dead weight. He could have learned of the controversy from a review of a book with a Christian theme.

In the December 1776 issue of *The Monthly Review*, Cowper might have read a review of *An Apology for Christianity, in a Series of Letters, Addressed to Edward Gibbon, Esq; Author of the Decline and Fall of the Roman Empire* by Richard Watson, the Regius Professor of Divinity in the University of Cambridge.<sup>31</sup> In a series of six letters Dr. Watson takes issue with the controversial Chapters 15 and 16 of Volume I of Gibbon’s famous history, which had been published earlier that year. (Volumes II through VI of the *Decline and Fall* were yet to come.)

The review is 9 pages long, but 2 pages are devoted to a passage in the book where Dr. Watson digresses to speak about another issue that’s been bothering him. What follows is quoted in the review directly from a ten-page passage in the book<sup>32</sup>. The page numbers refer to the review:

I cannot help taking notice of an argument, by which some philosophers have of late endeavoured to overturn the whole system of revelation: And it is the more necessary to give an answer to their objection, as it is become a common

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<sup>30</sup> Roger, *Buffon*, p. 188

<sup>31</sup> *The Monthly Review; or, Literary Journal*, Vol. LV (Dec. 1776), pp. 453–461.

<sup>32</sup> Richard Watson, *An Apology for Christianity* (Cambridge University Press, 1776), pp. 254–263.

subject of philosophical conversation, especially amongst those, who have visited the continent. (page 460)

The implication is that those who have “visited the continent” are likely to have come into contact with the skeptical philosophes of Paris and perhaps the theories of Buffon.

The objection tends to invalidate, as is supposed, the authority of Moses; by shewing, that the earth is much older, than it can be proved to be from his account of the creation, and the scripture chronology. We contend...

(meaning that *orthodox Christians* contend)

... that six thousand years have not elapsed, since the creation; ...

(that is, *less than* six thousand years have elapsed)

... and these philosophers contend, that they have indubitable proof of the earth’s being at the least fourteen thousand years old; and they complain, that Moses hangs as a dead weight upon them, and blunts all their zeal for inquiry. (page 460)

That last passage is footnoted to reference “Brydone’s Travels,” and the review is cited. Dr. Watson makes it sound as if Brydone’s travelogue has influenced a great many people who now complain that they are inhibited from investigating the age of the earth, which is very interesting if it is so.

The book (and the quoted section in the review) goes on to summarize Recupero’s analysis of the lava. Dr. Watson then alludes to some people who distinguish between the age of the human race and the age of the earth. All that Moses asserts is that the human race is 6,000 years old; the earth might be much older.

It might be briefly answered to this object, by denying, that there is anything in the history of Moses repugnant to this opinion concerning the great antiquity of the earth; for though the rise and progress of arts and sciences, and the small multiplication of the human species, render it almost to a demonstration probable, that man has not existed longer upon the surface of the earth, and according to the Mosaic account; yet, that the earth itself was then created out of nothing, when man was placed upon it, is not, according to the sentiments of some philosophers, to be proved from the original text of sacred scripture; ...

The idea that the earth might be much older than the human race became one of the common ways of reconciling Genesis and geology. Dr. Watson then makes it clear that while he might or might not agree with this view, it’s not a necessary conclusion:

... we might, I say, reply, with these philosophers, to this formidable objection of the Canon, by granting it it’s full extent; we are under no necessity, however, of adopting their opinion, in order to shew the weakness of the Canon’s reasoning. (page 460)

Dr. Watson then goes on to cast doubt on Recupero's history of the lava flow, and rises the possibility that different beds of lava might require different periods of time to be covered with fertile soil. The quoted section in the review concludes:

I will not add another word upon this subject; except that the bishop of the diocese, was not much out in his advice to Canonico Recupero — to take care, not to make his mountain older than Moses; though it would have been full as well, to have shut his mouth with a reason, as to have stopped it with the dread of an ecclesiastical censure. (page 461)

And there we have something that resembles a threat, although an impotent one.

Canon Recupero and Mount Etna also show up in the September 1778 issue of *The Monthly Review*. This is a review<sup>33</sup> of a book by another cleric, George Costard, who is identified as Vicar of Twickenham, Middlesex. His book is called *A Letter to Nathaniel Brassey Halhead, Esq.* It is a commentary on the preface to an English translation by Nathaniel Brassey Halhed (as he spells his name) of *A Code of Gentoo Laws, or, Ordinations of the Pundits, from a Persian Translation, Made from the Original, Written in the Shanscrit Language.* (Gentoo is an antiquated word for Hindu.) After two paragraphs, the review states:

Several of the arguments of this letter do not seem to us quite so conclusive as they may appear to the Author: but as he has taken particular pains with the arguments of Recupero the historiographer of Mount Ætna, according to the representation of Mr. Brydone, we shall lay the chief part of what he says upon that subject before our Readers, with a few observations. (page 187)

What follows is a complex and mind-numbing historical argument that is quoted verbatim from seven pages in the book. The reviewer sums it up in a tone of tolerance:

So that after all this critical flourish and parade of confutations, we can only infer that the date of the eruption is something older than Mr. Brydone makes it.... We hope ... that the dignitaries in the Catholic church will not countenance the general opinion of their own infidelity, by suppressing the work of Recupero, and thereby shewing that they dread the progress of philosophy as destructive to their cause. (pages 190 – 191)

The tone of tolerance does not necessarily indicate a change in mood in the editorial offices of *The Monthly Review*, but only that a different anonymous reviewer is writing.

In the January 1779 issue of *The Monthly Review*, William Cowper might have read a review of a book published the previous year entitled *An Inquiry into the Original State and Formation of the Earth* by John Whitehurst.<sup>34</sup> The review begins:

Our learned Readers are well acquainted with the various and, some of them sufficiently whimsical theories, which have been invented by speculative

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<sup>33</sup> *The Monthly Review; or, Literary Journal*, Vol. LIX (Sept, 1778), pp. [187–191](#).

<sup>34</sup> *The Monthly Review; or, Literary Journal*, Vol. LX (Jan. 1779), [pp. 37–47](#).

philosophers, with a view, principally to account for the singular appearances that this globe exhibits on and beneath its surface; and to discover the causes of the great changes that an examination of its various *strata* prove it to have undergone, in times far antecedent to all written history and tradition. (page 37)

The words “far antecedent” seem to suggest an acceptance that the earth has a long history prior to the chronicles of Moses.

The ingenious Author of this production has had the same object in view with his philosophical predecessors; but professes, and with some justice, to follow a very different, and surer, though more humble route. (pages 37 to 38)

The reviewer indicates that Whitehurst makes proper deductions from data, and although he does sometimes speculate, it's not comparable to Buffon's approach:

His is a sober and substantial system, however, when compared with the visions of some world-makers; particularly that of the great French naturalist, who instead of groping into the bowels of the earth, begins his inquiry with a flight into the planetary regions. (page 38)

What the reviewer appreciates most of all is that Whitehurst is not oblivious to the history of the earth as recorded in scripture:

At the close of this account, the Author marks the coincidence between his theory and the Mosaical history of the Creation. On many other occasions, *where they coincide*, the Author does not fail to remind us of this coincidence. Nevertheless, in some few instances, Moses may perhaps be thought to hang nearly as heavy on our Theorist, as he lately did on the neck of the Canon *Recupero*. (page 39)

Once again, a footnote references the review of Brydone's travelogue, now five and a half years after it appeared.

John Whitehurst was primary a maker of clocks and other instruments, such as sundials and barometers, but he devised more extensive mechanisms for plumbing and heating homes, and he contributed significantly to the development of the steam engine.<sup>35</sup> He was the oldest of the dozen or so polymaths and freethinkers known as the Lunar Society of Birmingham (and chronicled by historian Jenny Uglow<sup>36</sup>), so called because they regularly met during the full moon for safer transport at night. Their numbers included Joseph Priestly, James Watt, Erasmus Darwin (Charles's grandfather), and the pottery entrepreneur Josiah Wedgwood (also Charles Darwin's grandfather).

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<sup>35</sup> For biographical information, see Maxwell Craven, *John Whitehurst: Innovator, Scientist, Geologist, and Clockmaker* (Stroud: Fonthill, 2015).

<sup>36</sup> Jenny Uglow, *The Lunar Men: Five Friends Whose Curiosity Changed the World* (NY: Farrar, Straus and Giroux), 2002.

Whitehurst had an interest in the geology of Derby, “in part to obtain such a competent knowledge of subterraneous geography, as might become subservient to the purposes of human life, by leading mankind to the discovery of many valuable substances which lie concealed in the lower regions of the earth.”<sup>37</sup> These substances included coal, iron ore, marble, and gypsum. The *Inquiry into the Original and Formation of the Earth* does just that — particularly in the Appendix that describes the geology of Derbyshire in more detail — but it also treads carefully through the reconciliation with Genesis.

Whitehurst draws parallels between the order of Creation in both strata and scripture. He identifies just “one universal deluge”<sup>38</sup> and even uses the long lifespans of antediluvian people such as Adam, Methuselah, and Noah to demonstrate that “the great analogy between revelation and reason, may be considered as corroborating the truth of each.”<sup>39</sup> But Whitehurst avoids attributing anything to miracles. The changes in the earth occur solely as a result of natural processes. These processes are implicitly long, slow, and progressive. Whitehurst sidesteps any talk of actual timescales, but it’s clear that the idea of individual days of Creation has been jettisoned. This is what the reviewer is alluding to when mentioning Canon Recupero.

Whitehurst’s more free-thinking friends in the Lunar Society were disappointed with the quantity of Genesis in the book. Josiah Wedgwood wrote in a letter about Whitehurst’s book that he was

fully perswaded his manuscript has undergone as many alterations since its first formation by the *fine philosopher* of Derby as his world has suffer’d by earthquakes, & inundations ... I own myself astonish’d beyond measure at the labour’d & repeated efforts to bring in & justify the mosaic account beyond all rhyme or reason.<sup>40</sup>

Certainly it was not unreasonable for Whitehurst to believe that a book such as his that ignored Genesis might be pilloried in periodicals such as *The Monthly Review*. Whether he acted out of sincerity or prudence, we do not know.

In 1778, Buffon published another supplement to *Histoire Naturelle* called *Les Époques de la Nature*<sup>41</sup> that expanded on the theory he first presented in 1749. Buffon now identifies seven epochs beginning when the earth and planets took form and concluding when humans arrived on earth. The timeframes for these epochs were derived from the supplement he published earlier based on temperatures of cooling spheres.

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<sup>37</sup> Quoted in Craven, *John Whitehurst*, p. 94.

<sup>38</sup> John Whitehurst, *An Inquiry into the Original State and Formation of the Earth* (London: J. Cooper, 1783), [p. 101](#).

<sup>39</sup> Whitehurst, *Inquiry*, [p. 135](#).

<sup>40</sup> Quoted in Uglow, *The Lunar Men*, pp. 300–301.

<sup>41</sup> Recently available in an English translation: Georges-Louis Leclerc, le comte de Buffon, *The Epochs of Nature* (University of Chicago Press, 2018).

*The Monthly Review* tackled Buffon's new volume in two parts,<sup>42</sup> and begins by characterizing this "bold genius" as "certainly more adventurous than prudent in his philosophical flights." With reference to the idea that the earth has been cooling since it was ejected from the sun, the reviewer writes:

The calculations and fancies he has exhibited on this subject, must (if we are not much mistaken) have made him smile inwardly at the liberty, which he sees, that a spoilt child of fame may take with the public. (page 531)

The reviewer's skeptical tone continues, particularly regarding the age of the earth. In the book's preliminary discourse, Buffon

obviates an objection which he foresees will be brought against his whole theory, on account of its attributing to the matter of our terrestrial globe such a remote antiquity, as is incompatible with the Mosaic account of the creation, and the 6000 years during, which that account assigns to our globe. M. DE BUFFON cripples through this objection as well as he can, by distinguishing the period of duration that intervened between the creation of matter in general, and the production of light, from that which intervened between the production of light and its separation from the darkness, and by considering the *six days* of which Moses speaks, as six periods of duration, which may be lengthened out, as far as is necessary to accommodate them to philosophical discoveries and calculations. (page 537)

In the recent English translation of *The Epochs of Nature* cited earlier, this discussion begins on page 15. It was becoming common around this time for people to reconcile Genesis and geology through these two approaches: by assuming a long period of time between the first two verses of Genesis, and by assuming that the six days were actually long eras. But this reviewer is resistant:

Thus he bends the Mosaical narration to his hypothesis. He does more: if his explication of the sacred writings, through *plain* and *perspicuous*, should appear satisfactory to some rigid maintainers of the *literal sense* of Holy Scripture, he desires modestly (and we hope sincerely) 'that such persons would judge him by his intention, and consider, that his system, of the Epochs of Nature, being *merely hypothetical*, can, by no means, prove detrimental to *revealed truths*, which (*continues he*) are to many *unchangeable axioms*, independent on every hypothesis, and to which I have submitted, and do still submit my ideas.' — (page 537)

The reviewer evidently doubts Buffon's sincerity that he is presenting these ideas as "merely hypothetical," and that prompts a rather vicious attack on Buffon's character:

We shall make no commentary on these concessions in favor of revealed religion, nor shall we compare them with other parts of this Author's writings.

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<sup>42</sup> *The Monthly Review; or Literary Journal*, Vol. LXI Appendix (1779), pp. 531–543; Vol. LXII (May, 1780), pp. 397–401.



There is no kind of contrast so disgusting to us, as that which affects candour, veracity, and moral character: we willingly turn away our view from it, and avoid, as much as duty will permit us, to discover it, — in men, more especially, whom genius, talent, and good-nature, have made respectable.  
(pages 537 to 538)

The reviewer should be thankful that Buffon at least paid lip service to religion. That is not the case with a young medical doctor named George Hoggart Toulmin. Toulmin graduated from Edinburgh University, where he was undoubtedly exposed to ideas of the Scottish Enlightenment as well as “the more speculative naturalistic philosophers of the French Enlightenment.”<sup>43</sup> His first book, *The Antiquity and Duration of the World*,<sup>44</sup> was published in 1780, and was later revised, expanded and retitled as *The Antiquity of the World* (1783), *The Eternity of the World* (1785), and *The Eternity of the Universe* (1789).

Historian of geology Roy Porter calls Toulmin’s book “an overt gesture of political radicalism” that was “meant to provoke ... Christian anger.”<sup>45</sup> In the 200 pages of *The Antiquity and Duration of the World*, Toulmin charges like a one-man cavalry of the Enlightenment. He has little patience with “the baneful and gloomy influence of Gothic barbarism and superstition” (page vii) and those who would “trace their own lineal descent from their first imaginary parents” (page 3) and “persuade us, that Nature is but of some thousand years duration” (page 33). It is Toulmin’s intent to “grant eternity to Nature” (page 199).

The June 1781 issue of *The Monthly Review* dispensed with Toulmin’s book in a page and a half<sup>46</sup> as an “illogical and declamatory performance,” mocking Toulmin’s presumption of intellectual superiority, and condemning it as “a slight foundation, surely, for a system of *Atheism!*” For if the world existed forever, then there was no Creation, and no role for a Creator.

It is impossible to know how many of these reviews William Cowper saw and read prior to beginning work on *The Task* in October 1783, but any one of them is likely to have given him worry, and instill in him a skepticism that natural philosophy would bring people closer to God. Immediately after the passage in *The Task* quoted above where he condemns those who “contrive creation,” Cowper continues:

Great contest follows, and much learned dust  
Involves the combatants, each claiming truth,  
And truth disclaiming both. And thus they spend  
The little wick of life’s poor shallow lamp,

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<sup>43</sup> Roy Porter, “George Hoggart Toulmin’s Theory of Man and the Earth in the Light of the Development of British Geology,” *Annals of Science*, vol. 35 (1978), 339–352.

<sup>44</sup> George Hoggart Toulmin, *The Antiquity and Duration of the World*, (London: T. Cadell, 1780).

<sup>45</sup> Roy Porter, “Philosophy and Politics of a Geologist: G. H. Toulmin (1754–1817),” *Journal of the History of Ideas*, Vol. 39, No. 3 (Jul. – Sep., 1978), 435 – 450.

<sup>46</sup> *The Monthly Review; or, Literary Journal*, Vol. LXIV (June 1781), [pp. 412–413](#).

In playing tricks with nature, giving laws  
To distant worlds and trifling in their own.<sup>47</sup>

Since the time of John Ray in the 17<sup>th</sup> century, a strong current of natural theology had run through British science, reaching a peak with the publication of William Paley's famous *Natural Theology* in 1802. The investigation of the natural world was supposed to divulge divine design and the beneficence of God. William Cowper was one of those evangelicals who rejected natural theology because it substituted empiricism for faith, which (as Cowper pleads in this passage) can contradict the real truth of revelation.

The 1785 publication date of *The Task* thus marks a significant (if unusual) milestone in the history of geology. Cowper's allusion to the "great contest" of brewing controversies is certainly the impression a reader would receive about developments in earth science as disseminated to the literate public through the literary periodicals. But *The Task* shares the year 1785 with more conventional events in geology's history.

*The Task* was published in July 1785. On 12<sup>th</sup> May 1785, English cleric and antiquarian Rev. James Douglass read a paper to the Royal Society (published that same year with appendices as *A Dissertation on the Antiquity of the Earth*) in which he consolidated research that indicated a vast age of the earth. He reconciled these findings with Genesis by noting the difficulty in counting days prior to the creation of the sun, and indicating that "many well-informed persons have therefore been inclined to suppose that the earth was created in six expanses of time, instead of six days ... the power of the Almighty would be still manifest, and fully as important, as we find it to be recorded in the first book of Genesis."<sup>48</sup>

The year 1785 was also important in the life of James Hutton, who formulated a concept of the history of the earth that would prove to be extremely influential. Born in Edinburgh in 1726 (nine months before the death of Isaac Newton) and educated as a doctor, Hutton ran a farm where he experimented with agricultural innovations and explored meteorology. Hutton hovered on the fringes of the Scottish Enlightenment. He knew David Hume (although it's not quite certain they ever met) and he was friends with Adam Smith.

On 7 March and 4 April 1785, a paper by James Hutton was read by Joseph Black to the members of the Royal Society of Edinburgh. This organization had just recently been founded, so the publication of Hutton's 96-page paper had to wait until the first *Transactions of the Royal Society of Edinburgh* appeared in 1788, where it was titled "Theory of the Earth; or an Investigation of the Laws observable in the Composition, Dissolution, and Restoration of Land upon the Globe."<sup>49</sup>

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<sup>47</sup> William Cowper, *The Task*, lines 161–166.

<sup>48</sup> James Douglas, *A Dissertation on the Antiquity of the Earth* (London: Logographic Press, 1785), pp. 40-42.

<sup>49</sup> *Transactions of the Royal Society of Edinburgh*, Vol. I (Edinburgh: J. Dickson, 1788), pages 209–304.

James Hutton had no doubt that the earth he was examining was the result of divine will. He begins with a statement solidly in the tradition of natural theology:

When we trace the parts of which this terrestrial system is composed, and when we view the general connection of those several parts, the whole presents a machine of a peculiar construction by which it is adapted to a certain end. We perceive a fabric, erected in wisdom, to obtain a purpose worthy of the power that is apparent in the production of it. (page 209)

The earth has been designed for a purpose; that purpose (he contends a few pages later), is for the habitation of human life:

The globe of this earth is evidently made for man. He alone, of all the beings which have life upon this body, enjoys the whole and every part; he alone is capable of knowing the nature of this world, which he thus possesses in virtue of his proper right; and he alone can make the knowledge of this system a source of pleasure and the means of happiness. (pages 216 – 217)

But throughout his paper, Hutton will go no further in describing a role for the Creator other than the fabrication of this “beautiful machine” (page 215) and he makes no concessions towards scripture.

Hutton knows that the earth is much older than “the Mosaic history” (page 217) and his entire theory is based on the idea that the slow and gradual processes that have altered the earth’s state in the past are the same processes still in operation. The earth’s machine is a cyclical engine of erosion and accumulation, of collapse and upheaval. Almost 50 years later, after this concept is described by Charles Lyell in his *Principles of Geology*, it will become known as *uniformitarianism*.

How old is the earth? Hutton does not know, for “we might just as well measure the distance to the stars without a parallax, as to calculate the destruction of the solid land without a measure corresponding to the whole” (pages 298 – 299). But he concludes his paper somewhat ambiguously with the most famous sentence in the history of British geology:

The result, therefore, of our present enquiry is, that we find no vestige of a beginning, — no prospect of an end. (page 304)

Even a poet like William Cowper, sensitive to the shifting ground on which he strolled, so sure of the earth’s age and yet alert to the growing presence of people who suggested that Moses “was mistaken in its age,” could not have predicted this: a denial of Creation as well as no hope of Resurrection.