

AN OLD AGE FOR THE EARTH IS THE HEART OF EVOLUTIONISM

A typical accommodationist claim about chronology runs something like this: "Even if it could be shown that the earth is young (which it is not), that would be irrelevant to the evolutionary chronology of the universe, because there are independent evolutionary evidences that the universe is as old as evolution says it is. Furthermore, the age issue is not really important to evolution anyway." Such statements are not true.

Evolutionists have long emphasized the centrality of huge ages to evolutionism. Evolutionists have also asserted that if the eons did not exist, evolution would be impossible. **Further, the supposed evidences of the vast antiquity of planets, stars, galaxies, and the universe ultimately rest on the belief in the evolutionary age of the earth.** The evolutionary chronologies for the universe and its parts are therefore not independent of the alleged old age of the earth. **If the earth is shown to be young, the evolutionary evidence for an old universe crumbles.**

I. TIME IS THE CENTRAL REQUIREMENT FOR EVOLUTIONISM

Astrophysicist Arthur S. Eddington acknowledged the absolute primacy of time, without which evolution would be impossible and inconceivable: "Looking back through the long past we picture the beginning of the world -- a primeval chaos which time has fashioned into the universe that we know."¹ In Eddington's view time has evidently taken the place of the Creator. Since this remains the conventional perspective of the function of time in cosmic evolution, it is useless to maintain that the age issue does not implicitly enter into virtually all evolutionary theorizing.

Eddington was not only an eminent scientist but a well known popularizer of science, especially astronomy. He repeatedly stated his belief in the centrality of time for evolutionism. In the evolution of the universe, he wrote, "Time occupies the key position [his capitalization]."² **Carl Sagan described the evolution of the universe with "time" replacing God as the First Cause:**

"For unknown ages ... there were no galaxies, no planets, no life. ... A first generation of stars was born. ... In the dark lush clouds between the stars, smaller raindrops grew, bodies far too little to ignite the nuclear fire ... Among them was a small world of stone and iron, the early Earth. ... One day a molecule arose that ... was able to make crude copies of itself. ... life had begun. Single-celled plants evolved ... plants and animals discovered that the land could support life. ... [Some animals] became upright ... emerging into consciousness. At an ever-accelerating pace, [consciousness] invented writing, cities, art and science, and sent spaceships to the planets and the stars. These are some things that hydrogen atoms do, given 15 billion years of cosmic evolution."³

If to Sagan time was the "creator" which brought the universe into existence, planetary astronomer William K. Hartmann has expressed the same idea, namely, that **time is really the only necessity for evolution -- a "long" time:** "From all we have

just said, we conclude that if planetary surfaces with the necessary conditions - liquid water and the 'CHON' chemicals (carbon, hydrogen, oxygen, and nitrogen) - exist long enough anywhere, life is likely to evolve."⁴

With time as the evolutionary agent, it is no wonder that the evolutionary expectation of finding extraterrestrial life has over the decades gone from disrepute to popular acceptance.⁵ On the other hand, without sufficient time, evolution, nature's "self-realization," would not happen at all.⁶

II. EVOLUTIONARY CHRONOLOGY IS TIED TO THE AGE OF THE EARTH

All evolutionary cosmic ages are in the final analysis based on the evolutionary age of the earth, so if the evolutionary chronology is destroyed for the earth, it is demolished for the cosmos as well. The sun is thought to be old because the earth is old, other stars are thought to follow a mode of operation and chronology based on that of the sun,^{7,8} and the Hubble constant and the age of the universe are adjusted in an attempt to make the cosmos seem to be older than the stars.

Coming back to the solar system, the moon is dated in such a way as to make it slightly older than the oldest rocks on earth, and the solar system is dated from meteorites in such a way as to be older than both the earth and the moon.

Such reasoning is not really scientific, a fact pointed out occasionally in the secular press: "Many things loosely described as scientific 'facts' are not really facts at all. For example, you might have the impression that this book stated the 'fact' that the universe is between 10 and 20 billion years old. But such a usage of the word 'fact' is really just a habit of speech that is seen to be imprecise on close examination. In reality, the age astronomers assign to the universe is an *inference* from the large amount of observational data that we have [emphasis in original]."⁹ **In other words, there are no data compelling the acceptance of evolutionary ages, but researchers have reached the conclusions they wanted to believe.**

Physicists in the late 1800s, followed by astronomers in the early 1900s, acquiesced to geological dates for the age of the earth, readjusting their cosmic and stellar dates so as not to conflict with geological claims. **Physicists as well as astronomers were forcing their chronologies into the evolutionary time frame for the earth:**

"The conflict between physics and astronomy over the Age of the Earth was resolved in the 1950s. ... [T]he conflict between physics and geology ... had ended 50 years earlier with a complete reversal by the physicists [in favor of geological dates for the earth;] this time it was the astronomers who revised their estimates and suddenly switched to a much longer time scale [to avoid conflict with the geologists]. They had decided that Hubble had underestimated the intrinsic luminosities of distant stars and the Cepheid variable scale of distances had to be recalibrated; together the two corrections [read: adjustments] expanded the time scale by a factor of 4, with further increases to come in subsequent decades. By the mid-1980s, estimates of the age of the universe generally

ranged from 10,000 to 20,000 m.y., safely beyond the estimates of the Age of the Earth, which had stabilized at 4500 to 4600 m.y. ... According to David Raup, one result of this episode is that 'geology has a curious moral authority over astrophysics' ..."¹⁰

Further, the first widely-accepted rationale for radiometric dating of the earth was put forward by T.C. Chamberlain. **He based his estimates on the supposed time for biological evolution**, saying that his view "takes due account of biological requirements,"¹¹ meaning that **the presumed age of the earth for biological evolution had to be consulted before radiometric dates could be selected to "confirm" this old age.**

Richard Milton, who is not a young earth advocate, nevertheless points out that the readiness to reject radiometric dates except those giving "expected values" is why various radiometric methods can be claimed to converge in the "ages" they "measure."¹² "Thus the published dating figures *always* conform to preconceived dates and never contradict those dates. If all the rejected dates were retrieved from the waste basket and added to the published dates, the combined results would show that the dates produced are the scatter that one would expect by chance alone [emphasis in original]."¹³ Woodmorappe makes the same observation.¹⁴

III. EVOLUTION DATES THE SUN BY THE EVOLUTIONARY AGE OF THE EARTH

Evolutionism asserts that the earth is billions of years old. **Astronomers for several generations have stated that this is the only real reason the sun is believed to have an age of billions of years.** In the 1920s Eddington wrote, "Formerly the contraction theory of Helmholtz and Kelvin held sway. This supposes that the supply [of the sun's energy] is maintained by the conversion of gravitational energy into heat owing to the gradual contraction of the star. The energy obtainable from contraction is quite inadequate in view of the great age now attributed to the sun."¹⁵

And why did Eddington view solar contraction as insufficient to supply the sun's energy output over the sun's lifetime? Because, "It is not much use extending the age of the earth without extending the age of the sun."¹⁶ In other words, as the evolutionary age of the earth expanded in the early twentieth century, the supposed age of the sun expanded to keep pace.

Whatever actually occurs in the sun -- whether fusion only, or fusion with a degree of contraction -- the sun's presumed evolutionary age is based ultimately on the alleged age of the earth. Eddington made this point repeatedly: "Geological, physical, and biological evidence seems to make it certain that the sun has warmed the earth for more than a thousand million years [now taken to be some 5 billion years]."¹⁷ **In context, the "physical" evidence to which Eddington referred was nothing more than the supposed geological and biological "evidence" that the earth is old.** Eddington was explicit about this: "On such an important question we should not like to put implicit trust in [astronomical arguments] alone, and we turn to the sister sciences for other and perhaps more

conclusive evidence. ... The age of the older rocks [of the earth] is found to be about 1,200 million years ... The sun, of course, must be very much older than the earth and its rocks."¹⁸ The conventional age of the oldest terrestrial rocks have expanded since Eddington's time to some 3.8 billion years.¹⁹

Science popularizer George Gamow described the same dependence of solar dating on the evolutionary age of the earth: "Our sun is now only about 3 or 4 billion years old ..." And the reason for this age? -- "... since the estimated age of our earth is of that order of magnitude."²⁰ The same "logic" for dating the sun at billions of years continues to this day: "By the end of the nineteenth century, geological evidence had increased the estimated age of the Earth to several *hundred* millions of years, and the discovery of radioactivity at the close of the century made it possible to measure the Earth's age with even greater certainty at around 4.5 *billion* years. ... [It] is hard to imagine how the Earth could be much older than the Sun [emphases in original]."²¹

This rationale for dating the sun has been commonly acknowledged: "The Sun's age was measured at 4.6 billion years by dating planetary matter."²² Hartmann has worded this statement in such a way as to imply that evidence from outside the earth confirms the sun's old age, but this statement is misleading, for in context the "planetary" material to which he refers is nothing more than the rocks of the earth. In a more forthright assessment, astronomer John Fix says, "Geologists have found rocks 3.5 billion years old that contain fossils of marine organisms. These discoveries clearly demonstrate that the Sun has warmed the Earth for at least 3.5 billion years and probably for as long as the Earth has existed."²³

Researchers are sometimes objective about the reasoning illustrated in the preceding paragraphs. Solar expert John Eddy stated that, "I suspect that the Sun *is* 4.5-billion years old. However, given some new and unexpected results to the contrary, and some time for frantic recalculation and theoretical readjustment, I suspect that we could live with Bishop Ussher's value for the age of the Earth and the Sun. I don't think we have much in the way of observational evidence in astronomy to contradict that. Solar physics now looks to paleontology for data on solar chronology [emphasis in original]."²⁴

This is a staggering statement, for Eddy admitted that there is really no hard evidence that the sun is very old. Indeed, Eddy went so far as to propose the possibility of returning to Ussher's chronology which puts creation at 4004 BC. Since Eddy's last sentence quoted above claims that evolutionary solar chronology depends on "paleontology," Eddy has again affirmed that **the evolutionary age of the sun is based ultimately on nothing more than the presumed evolutionary age of the earth.**

IV. EVOLUTION DATES HEAVENLY BODIES BY THE EVOLUTIONARY AGE OF THE EARTH

Hartmann claims that, "The age of the solar system is 4.6 Gy [billion years]. This figure has been derived from studies of

rocks from three planetary sources: the meteorites ... the moon, and Earth."²⁵ There appear to be three independent dating sources (the meteorites, the moon, and the earth) referenced here, but in fact the age of the moon is established to agree with the earth's alleged age.^{26,27} and that of meteorites is set to be slightly older than the earth.²⁸ **The age of the earth remains the chronological baseline for evolutionism.**

Chronologies for other planets such as Mars may be worked out by comparison with the assumed lunar chronology,²⁹ but since the lunar chronology is based on the presumed age of the earth, such chronologies are not truly independent. But such chronologies have been entrenched for many decades, and it has become common to speak of them as if they are independent verifications of evolutionary ages.³⁰

A recurrent phenomenon in the history of science is that a paradigm becomes so widely accepted that the basic assumptions behind it are no longer questioned, and the paradigm is taken as virtually self-evident truth.³¹ This appears to have come to pass with evolutionary chronologies. In such a situation, there may be the appearance of vigorous debate, but the debate is actually constrained within "safe" boundaries so as to leave the paradigm untouched (e.g., asking whether primordial meteoritic material is 4.55 or 4.65 billion years old, but *not* questioning whether the range of ages under discussion has any validity). To expose fundamental fallacies of the paradigm is nearly always unacceptable.³²

In dating the evolutionary age of the cosmos, the presumed size of the universe is the only "evidence" of its age: "... its size is inextricably bound up with its age. The Universe is fifteen billion light years in size because it is fifteen billion years old."³³ But the estimated size of the universe is tied to the presumed expansion rate allegedly due to the putative Big Bang. The quantity employed to describe the rate of expansion is the Hubble constant.³⁴

It might seem as if we have in the Hubble constant at last a truly independent dating method, but **in fact the size of the Hubble constant is evaluated to give an expansion time (or age) which is proportional to the evolutionary age of the earth:** "By using the Hubble relation, and working backward in time, the time of the big bang can be estimated."³⁵

When the Hubble constant was initially evaluated, the "upper limit" age it gave was too small to satisfy evolutionary geologists: "Unfortunately, the reciprocal of Hubble's constant gave an age for the universe of only 1.8 billion years. Rocks on earth were then already known to be as old as 3.0 billion years. Obviously, the universe could not be younger than the earth."³⁶

Once again, a supposedly independent evolutionary chronometer works out in reality not to be independent, but is tied back to the evolutionary age of the earth. Indeed, the Hubble constant has been changed by a factor of four or more since the 1920s,^{37,38} a revision which has corresponded to evolutionary inflation of the age of the earth.³⁹ On the other hand, though at one time the earth's evolutionary age was predicted by some to be almost indefinitely inflatable,⁴⁰ it settled at around 4.5 billion years. **This completed the chronological paradigm shift initiated**

primarily by Charles Lyell a century and a half earlier in the 1830s.⁴¹

V. EVOLUTIONISM DATES THE EARTH BY ARBITRARY UNIFORMITARIAN ASSUMPTIONS

If the evolutionary age of the earth were valid, then the evolutionary chronologies depending on the earth's age might be valid as well. **However, earth's conventional age was established by invoking arbitrary assumptions.** Physicist George Gamow described how the earth's age was set:

"Thorium and the common isotope of uranium (U^{238}) are not markedly less abundant than the other heavy elements ... Since the half-life periods of thorium and of common uranium are 14 billion and 4.5 billion years, respectively, we must conclude that these atoms were formed not more than a few billion years ago. [But] the fissionable isotope of uranium (U^{235}) is very rare, constituting only 0.7 percent of the main isotope ... The half-life of U^{235} is considerably shorter than that of U^{238} , being only about 0.9 billion years. Since the amount of fissionable uranium has been cut in half every 0.9 billion years, it must have taken about seven such periods, or about 6 billion years [now taken to be 4.5 billion years], to bring it down to its present rarity, **if both isotopes were originally present in comparable amounts.**"⁴²

Evolutionist (but anti-Darwinian) Richard Milton has summarized essentially the same argument: "[If] a deposit was composed of half uranium 238 and half its daughter product lead 206, then one would draw the conclusion that the deposit was 4,500 million [4.5 billion] years old. [This] is the average figure that is found for the Earth's crust."⁴³

There are two arbitrary assumptions in this reasoning. It can never be known that the pairs of isotopes in question were ever present on earth in comparable amounts, as both Gamow and Milton assume. Further, the mere occurrence of radioactive decay implies nothing about how long it has been happening. This is the fallacy of confusing the time to complete a process with the interval over which the process has been occurring. **The truth is that evolutionism needs the earth to be old, so assumptions have been selectively and arbitrarily chosen to make the earth appear old.**

The radiometric age for the earth is ultimately based on geological assessments of the age of the earth's rocks, and the age of the earth's rocks is ultimately based on extrapolations of a uniformitarian deposition rate for the (conceptual) geologic column. This rate in turn was derived from Charles Lyell's arbitrary assessment of the age of the Cenozoic.⁴⁴ In Lyell's time the earth's age was thought to be of the order of 100 million years at most. Lyell put the end of the Cretaceous and the beginning of the Cenozoic at 80 million years ago (compared to 65 million years today). The Cenozoic starts with the Tertiary, and the Cretaceous-Tertiary boundary is a significant demarcation in the fossil record, evidently connected with transition from Flood activity to the beginning of a post-Flood regime.^{45,46} However, the basis for Lyell's

chronology was not science, but rather a long-standing animus of the Word of God in general, and the chronology of Moses in particular. **Indeed, Lyell altered data in an attempt to make his dating scheme appear reasonable.**⁴⁷

Lyell was by training a lawyer, or in the terminology of the time, a barrister, a fact formally acknowledged in the title of the memorial volumes published after his death.⁴⁸ **Lyell's real "hidden agenda" was revealed in private correspondence with colleagues and friends.** He wrote that he had "driven" the biblical Flood "out of the Mosaic record."⁴⁹ He also revealed his plan for undermining the Bible. He would not make a frontal attack against the Scripture, but "conceived the idea ... that if ever the Mosaic chronology could be set down [discredited] without giving offense, it would be in an historical sketch ..."⁵⁰ Lyell's reference to "an historical sketch" meant a work about "historical geology" written from an evolutionary viewpoint. His well known *Principles of Geology* was the fulfillment of this plan.

In sum, Lyell using his legal skills would manufacture an opus presenting the alleged evolutionary version of the earth's geological past. He would lead his readers to doubt the chronology of Moses and the Bible as a whole without directly attacking it and without even naming it. With his *Principles of Geology*, published when he was only in his early thirties, he succeeded no doubt beyond his wildest dreams.

We are not left to wonder if Lyell was conscious of his indirect, deceitful maneuver against the Bible. He employed the same tactic generally, rarely asserting dogmatically what he wanted readers to believe, but cleverly allowing them to reach his conclusions on their own. Indeed, he wrote of his use of this tactic to encourage belief in biological evolution: "I left this rather to be inferred, not thinking it worthwhile to offend a certain class of persons by embodying in words what could only be a speculation."⁵¹ Darwin observed Lyell using this tactic: "Lyell is most firmly convinced that he has shaken the faith in the Deluge far more efficiently by never having said a word against the Bible than if he had acted otherwise... I have read lately Morley's *Life of Voltaire* and he insists strongly that direct attacks on Christianity (even when written with the powerful force and vigour of Voltaire) produce little permanent effect; real good seems to follow only the slow and silent side attacks."⁵²

Conclusions. "Time" in general, and the age of the earth in particular, is the heart of evolutionary theorizing. Even more, the evolutionary age of the earth is the ultimate foundation for other evolutionary chronologies, both inside and outside the solar system. The evolutionary age of the earth is ultimately based on nothing more than Lyellian uniformitarianism, radiometric claims notwithstanding, and Lyell's own agenda was to displace the biblical chronology with an evolutionary one. Aside from the many evidences that the cosmos does not have an evolutionary age, it is also true that discrediting an old age for the earth discredits old ages for the universe as well. Since the earth is not truly old, the entire evolutionary chronology for the sun, solar system, and the universe has no foundation. It is therefore no wonder that evolutionism has steadfastly heaped calumny on the concept of recent creation.

It is also clear that recent creationists must continue to defend the biblical doctrine of a young earth.⁵³

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