

EVOLUTION'S ACHILLES' HEELS

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OUTLINE

0. INTRODUCTION
1. NATURAL SELECTION
2. GENETICS
3. ORIGIN OF LIFE
4. FOSSIL RECORD
5. GEOLOGIC RECORD
6. RADIOMETRIC DATING
7. COSMOLOGY
8. ETHICAL IMPLICATIONS
9. SUMMARY

INTRODUCTION TO COSMOLOGY AND THE BIG BANG

History of the 'evolution' model of the universe

In 1929 astronomer Edwin Hubble discovered redshifts in the spectral lines of light from nearby galaxies. A redshift equates to a lowering of the frequency of its light (like the pitch of a train whistle dropping as the train goes past). This was interpreted as meaning the galaxies are moving away, the universe is expanding. Sir Fred Hoyle coined the term 'big bang theory' in a 1950 BBC radio interview.

This 'expanding' universe when extrapolated back to time 'zero' would theoretically appear to have arisen from a singular point, a 'singularity'. The encyclopedia Britannica¹ defines the cosmological meaning as a geometric point in space where mass is compressed to infinite density and zero volume.

Untestable & contradictory

The big bang, and corollary models invoked to support it are unprovable as they all involve assumptions that are untestable as required by the scientific method. Even many secular scientists don't accept the big bang, and many other models of the universe are still being debated today.

Since its inception, many modifications have been made to the standard model to try to make it fit observations. Discrepancies include the horizon and flatness problems, and the extreme alignment of cosmic microwave background radiation (CMB). There are also no viable models that acceptably explain the formation of stars, galaxies, solar systems, their planets, or their moons (especially earth's moon). The anthropic principle supporting a created universe is also unanswered, a huge 96% of the makeup of the universe supposedly consists of an unknown and unexplainable entity named dark matter and dark energy, and the amount of antimatter in the universe contradicts the big bang model.

LIGHT TRAVEL - YOUNG EARTH MODEL

When it comes to the discussion of light travel, the young earth model seems to be the only one claimed to have a problem. The predominant question is, "If the universe is young, how did light from distant galaxies billions of light years away get to the earth in only about 6,000 years?"

There is no proven answer, but various research papers report possible solutions to this light speed problem (many by secular scientists).

Speed of light slowing

- "João Magueijo, . . . claimed the speed of light has been slowing since the big bang."²
- Alan Montgomery, Mathematician and Lambert Dolphin, Physicist:
". . . the measured value of the velocity of light has decreased over the past 250 years."³

- “Barry Setterfield collated data of measurements of c spanning a period of about 300 years. . . . He and Trevor Norman, a mathematician also showed how. . . various constants (e.g. electron mass, Planck’s constant (h)) were varying progressively, if ever so slightly. . . .”⁴
- “[Noted physicist Paul] Davies, and astrophysicists . . . published. . . . The suggestion that the speed of light can change is based on data collected by UNSW astronomer John Webb. . . .”⁵
- The big bang model claims it was 25 orders of magnitude faster during inflation than it is now!

One-way speed of light hypothesis

Previously only the round trip time could be measured due to relativity complications, and the speed each way was presumed equal. But light has strange properties, for example: light from a source traveling at the speed of light would still only be the speed of light, not twice the speed.

So, in a condition where the speed of light traveling away was double, and the speed toward the observer was instantaneous, the same round trip time would be maintained which would resolve the light travel problem.

Time dilation hypothesis

This model is based on the effects of general relativity on time variations at different locations in the universe during creation. It postulates that during one day on earth, billions of years passed at edge of universe. This would provide enough time for light to travel to earth from even the remotest part of the universe during its creation.

LIGHT TRAVEL – BIG BANG MODEL

The big bang model of the universe has multiple light travel problems, plus many other problems.

The horizon problem

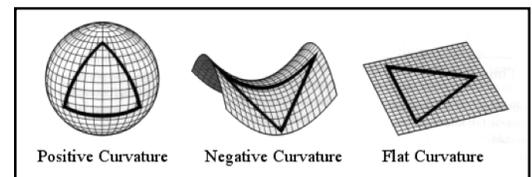
The Cosmic Magnetic Background (CMB) radiation is extremely uniformity, with only a 1 part in 100,000 density variation.⁶ But, the big bang model predicts a radial disbursement of matter and energy, so there wouldn’t have been enough time for light from evolved stars to travel perpendicularly across the universe.

The CMB radiation is supposedly radiation from the early universe, only 100,000 years after the big bang.

The flatness problem

A lecture . . . by Princeton cosmologist Robert Dicke:

“Dicke explained that matter, velocity, and gravity all balance to put space-time precisely on the dividing line between a "closed" and an "open" geometry. . . . [to produce] a flat universe. The critical density of the early universe must have been within one part in 10^{62} or less!”⁷

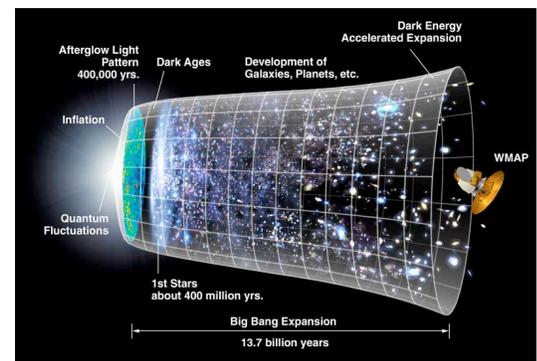


The inflation model ‘fix’ initiates more problems

Inflation, a huge velocity surge shortly into the big bang, was added to resolve these problems. This supposedly:

Resolved the horizon problem, as all areas of the infant universe were considered in contact with each other before the inflation period so they retained temperature uniformity.

Resolved the flatness problem, as rapid inflation pushed the universe far out so what we observe appears to be nearly flat. An example is comparing the very concave appearance of a wok up close, to a distant Imax theater screen. So:



- “. . .inflation has attempted to solve the problem . . . by postulating a short 10^{-32} second period of exponential expansion. . . . the universe is said to have increased . . . 10^{88} times larger.”⁸
- [This is equal to a volume increase rate of a trillion, trillion, trillion, trillion, trillion, trillion, trillion, trillion, trillion, trillion per second – 120 zeros! Gravity supposedly reversed, repelling the big bang ‘material’ at speeds trillions of times faster than the speed of light – all violations of the laws of science.]
- Alan Guth, Professor of Physics at MIT, who developed the cosmic inflation model, says: *“Roughly 50 forms of inflation have been proposed . . . double, triple, and hybrid inflation, tilted hybrid inflation, hyperextended . . . and inflation that is “warm,” “soft,” “tepid,” and “natural.””⁹*
- Dr. Paul Steinhardt, dir. of Princeton’s Centre for Theoretical Science, in a 2014 paper wrote: *“. . . inflationary theory. . . . is so flexible that it is immune to experimental and observational tests. First, inflation . . . can be adjusted to produce effectively any outcome. Second, inflation . . . almost inevitably leads to a multiverse. . . . [where] everything [can] happen an infinite number of times. . . . **the inflationary paradigm is fundamentally untestable, and hence scientifically meaningless** [this emphasis was featured in the centre of the original article].”¹⁰*

DARK ENERGY, MATTER, AND ANTIMATTER

Ninety six percent of universe unknown

Dark energy was invoked as the cause when the existing energy supplied the visible universe did not explain its present apparent accelerating expansion.

Dark matter involves rotating spiral galaxies.

“Physicists and astronomers expected that their [the stars] rotation speeds would . . . [decrease at] greater distances from the center. . . . Instead . . . the speeds are essentially constant beyond a certain distance from the galactic center. [This] . . . can be resolved by assuming . . . large amounts of “invisible” matter . . . surround these spiral galaxies.”¹¹

Thus the universe’s unknown and unexplainable composition is: dark energy - 74%, dark matter - 22%. The knowns are only: intergalactic gas - 3.6%, and solid objects (stars, planets, comets) - 0.4%

The antimatter problem

The big bang model predicts that the amount of antimatter in the universe should be proportionate to the amount of matter.

- However, only a trace amount of antimatter has been detected.
- So, we have another case where a big bang prediction contradicts observation.

ORIGINS OF CELESTIAL OBJECTS

Star formation

- The NASA Science Astrophysics explanation: *“Turbulence deep within these clouds gives rise to knots [concentrations] with sufficient mass that the gas and dust can begin to collapse under its own gravitational attraction. As the cloud collapses, the material at the center begins to heat up.”¹²*
- University of Oregon explanation: *“A dense gas clump breaks off from [the] molecular cloud and collapses.”¹³*
Problems with this hypothesis:
 - Turbulence: Turbulence works against collapse, not for it.
 - Gravitational attraction: “. . . gravity, a relatively weak force, would be overwhelmed by the increase in temperature and pressure, which would cause the gas [cloud] to expand . . .”¹⁴
 - Center begins to heat up: Even if the cloud began to collapse, any heating would drive the molecules apart proportional to the temperature increase.
 - Clump breaks off: This is contradictory to a cloud . . . collapsing from gravitational attraction.

- Professor Abraham Loeb (Professor of Science, Chair of the Dept. of Astronomy, Harvard University Center for Astrophysics) acknowledgment:
 “The truth is that we don’t understand star formation at a fundamental level.”¹⁵
 In effect, neither of the above ‘explanations’ passes scientific analysis.

Galaxy formation

- Professor Stephen Hawking’s considerations:
 - In an initial book he had galaxy formation at the bottom of his unsolved list.¹⁶
 - In another book he suggested that galaxies might have formed through the influence of dark matter on a brane world parallel to ours.¹⁷ [Brane (membrane) refers to string theory, where objects can propagate through spacetime according to quantum mechanical rules.]
 - In a later book yet he put galaxy formation back at the bottom of his unsolved list.¹⁸
- NASA hasn’t done any better in explaining origins. Their scientists have admitted that,
 “We have no direct evidence of how galaxies were formed [or] how galaxies evolved, whether they were formed from aggregations of smaller units or from subdivision of larger ones.”¹⁹

Solar system and planetary formation

- Caltech’s astronomer Mike Brown:
 - “Before we ever discovered any [exoplanets] we thought we understood the formation of planetary systems pretty deeply. . . . It was a really beautiful theory. And, clearly, thoroughly wrong. Exoplanet discoveries, with their masses, sizes, composition and orbital characteristics different than . . . predicted have effectively falsified that model. . .
 - [T]he Sun, which has about 99% of the mass of the solar system, has less than 1% of the ‘spin’ of the system. Thus . . . the claimed evolution of our solar system would violate the law of the conservation of angular momentum, requiring yet another “rescue device”. . . .”²⁰
- “It [is] surprisingly difficult for planetesimals to accrete mass during even . . . gentle collisions.”²¹
- “Planet formation is a paradox: according to standard theory, dust grains orbiting newborn stars should spiral into those stars rather than accrete to form planets.”²²

Anthropic principle

“The anthropic principle says that the universe appears “designed” for the sake of human life. . . . In 1961, astronomers acknowledged just two characteristics of the universe as “fine-tuned”. . . . Today, [2002] the number. . . . stands at thirty-eight. . . .

Evidence of specific preparation for human existence shows up in . . . the solar system, as well. . . . By the end of 2001, astronomers had identified more than 150 finely-tuned characteristics. . . . the odds that any given planet . . . would support intelligent physical life. . . . [are one in] (10^{173}) .”²³

This chance equation denominator is orders of magnitude greater than the alleged big bang inflationary volume increase. A chance of only 1/(1,000,000,000,000,000,000,000,000 . . . 173 zeros!)

SECULAR OBJECTIONS TO THE BIG BANG

An Open Letter to the Scientific Community

“The big bang theory relies on a growing number of hypothetical entities . . . never observed. Without them . . . a fatal contradiction between the observations . . . and the predictions. . . . In no other field of physics would . . . hypothetical objects be accepted . . . bridging . . . between theory and observation.” Over 500 scientists have addressed an Open Letter²⁴ expressing criticism.

‘Big Bang? A Critical Review’, published 2010 in the Journal of Cosmology

“This paper examines . . . various factors which undermine the theory of the Big Bang. . . .

- The origin . . . is a mathematically obscure state - a “singularity” of zero volume that contained . . . infinite energy. Why [it] existed, how it originated, and why it exploded, cannot be explained. . . . (Arp et al. 2004; Eastman 2010; Lerner 1991; Ratcliffe, 2010; Van Flandern 2002).

-the interpretation of red shifts as supporting a Big Bang, is also flawed and lacking validity (Arp et al., 2004; Lerner 1991; Ratcliffe 2010; Van Flandern 2002).
- In recent years . . . a number of very serious challenges. . . . large chains of galaxies spread throughout the universe forming gargantuan stellar structures separated by vast voids. . . . a network . . . on which about 90% of the galaxies are located. [an example of the non-uniformity]
-the Hubble Ultra Deep Field (HUDF) has revealed the presence of estimated 10,000 fully formed galaxies. . . . when the universe was barely 5% of its current age ($z \sim 7$).
- The Big Bang predicts general uniformity in the trajectory of galaxies, and yet . . . galaxies [are] crashing into each other from every conceivable direction. [another example of non-uniformity]
- In July 2003, the oldest planet yet was discovered. . . . whose origin dates back to about 23 billion years. . . . [But] planets could not have originated so early because the Universe had yet to generate heavy elements needed to make them."²⁵

IRRATIONALITY OF THE BIG BANG

Unexplainable, and Defies Logic and Science (expansion of 'A Critical Review' above)

The six miracles of the big bang:

- First, a quantum fluctuation supernaturally pops into being. Where did it come from and what did it pop into, as there was nothing (no space, time, matter, or energy) before the universe? There was NO EXISTANCE! The quantum fluctuation would have had to create space-time to have an existence to pop into.
- Then, this singularity supernaturally amasses infinite energy density!
- Then, a supernatural force causes it to explode!
- Then, a supernatural inflationary force reverses gravity, propelling the big bang contents faster than light!
- Then, another supernatural force of EXACTLY the right size perfectly stops the inflation!
- Then, another supernatural force causes the accelerated expansion apparently existing today!

Along with these we have false vacuums and residual false vacuums as envisioned below.

- “. . . .the decay of the false vacuum . . . created the matter of our universe. . . . While some regions decay into universes, other regions keep . . . creating other universes. Residual false vacuum from the creation of those universes creates still others, indefinitely. . . . [Cosmologist Alan] Guth says that this scenario is not only possible, it seems like a sure thing.”²⁶

The big bang model is becoming more and more bizarre to find explanations not forthcoming. A quantum fluctuation exists within space-time, so it would have had to exist before it existed to create the space-time for it to exist in! The only entity capable of creating the universe is one that exists outside of it (outside of space, time, matter and energy), and also exists in itself (is self-existent). Only an omnipotent transcendent being fits the model. It takes more faith to believe in six consecutive supernatural events plus all the problematic big bang data, much of which contradicts the laws of science, than in the supernatural God of Creation.

SUMMARY

- ❖ There are possible solutions to the light speed problem of the young earth model.
- ❖ The big bang model does not agree with observations and/or science regarding the:
 - Horizon problem (the extreme temperature uniformity of the cosmic microwave background).
 - Flatness problem (the requirement of the early universe's density being within one part in 10^{62}).
 - Anthropic principle (critically fine-tuned universe, solar system, and earth for intelligent life).
 - Inflation, the universe expanding a trillion, trillion, trillion, trillion, trillion, trillion, trillion, trillion trillion times in volume/second, faster than light with negative gravity, violates science.

- ❖ Dr. Paul Steinhardt of Princeton: “. . . inflationary theory. . . . so flexible that it . . . can be adjusted to produce effectively any outcome. . . . [It] almost inevitably leads to a multiverse. . . . [where] everything [can] happen an infinite number of times. . . . hence **scientifically meaningless.**”
- ❖ Lack of understanding the universe is evident in that 96% of its supposed substance is unknown.
- ❖ No scientifically sound model explaining the formation of stars and star clusters. As Professor Abraham Loeb states: “The truth is that we don't understand star formation at a fundamental level.”
- ❖ No scientifically sound model explaining the formation of galaxies. Still on Hawking's unsolved list.
- ❖ No scientifically sound model explaining the formation of planets and solar systems.
- ❖ Many secular objections to the big bang and evolution overall. Two specific to the big bang are:
 - In ‘An Open Letter . . .’: over 500 cosmologists criticize hypothetical and contradictory claims.
 - In ‘Big Bang? A Critical Review’ in the Jnl of Cosmology: many factors undermine the theory.
- ❖ A sequence of six miraculous occurrences: a quantum fluctuation popping into non-existent space-time, gaining infinite energy density, exploding, inflating, perfectly the reversing inflation, and accelerating again all supernaturally, is philosophy based on faith, not science.
- ❖ Decaying false vacuums creating our universe while other regions keep creating universes, and residual false vacuum from those universes creates still others, indefinitely, isn't science either.
- ❖ The only entity capable of creating the universe is one that is infinite and self-existent outside of it.

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