SUMMER READING

"HOW DO CREATIONISTS EXPLAIN THESE FACTS?"

SEDIBA: YET ANOTHER PALEO-BLUNDER?
The pronouncement last year that proof of Big Bang inflation was discovered in the form of gravitational waves has now officially been retracted. The media and the cosmological community has, once again, proven themselves to be irresponsible and rash in their boisterous claims. Inflationary theory, fundamental to the Big Bang Theory, remains without evidence, making its adherents possessors of a blind faith.

Jeff Miller, Ph.D.

The Rise and Fall of Bogus Evidence

In March of 2014, a wave of media attention was given to an announcement by cosmologists who gathered data at the South Pole using a special telescope (BICEP2). The headlines were bold.

- “Space Ripples Reveal Big Bang’s Smoking Gun” (Overbye, 2014, emp. added).
- “Big Bang’s ‘Smoking Gun’ Confirms Early Universe’s Exponential Growth” (Vergano, 2014, emp. added).
- “Scientists Find Cosmic Ripples from Birth of Universe” (2014, emp. added).
- “First Wrinkles in Spacetime Confirm Cosmic Inflation” (Cho and Bhattacharjee, 2014, p. 1296, emp. added).
- “The recent discovery of gravitational waves emerging from the Big Bang may point a way forward” (Afshordi, et al., 2014, p. 40, emp. added).
- “Detecting primordial gravitational waves is the closest thing to a proof of inflation that we are ever going to get” (Clark, 2014, p. 34, emp. added).

Apparently, inflation was proven. The facts were in. Empirical evidence for the beginning moments of the Big Bang had finally surfaced.

Under the Big Bang model, the Universe is theorized to be expanding outward from the point in space where the cosmic egg allegedly “exploded.” During the first moments after the Big Bang, Universal expansion occurred faster than the speed of light, according to the theory, and this is known as inflation. However, no direct evidence has ever substantiated the claim that the Universe inflated in the violent way implied by the Theory—only circumstantial evidence. According to the model, gravitational waves would accompany the initial, rapid expansion immediately after the “bang,” but no direct evidence has ever surfaced for their existence. The new discovery was hailed as the “first direct evidence” of Universal inflation (“Theory No More?...” 2014; “Scientists Find Cosmic Ripples....,” 2014; Landau, 2014).

Subsequently, we published an article responding to the claims (cf. Miller, 2014). In typical fashion, we highlighted the rashness of modern naturalists and the media, who make wild claims without adequate evidence. The announcements are loud, and the retractions tend to be soft. Sure enough, within three months, by June of 2014, the alleged findings were studied further, and the excitement of the celebration began to rapidly evaporate. Nature published an article titled, “Big Bang Finding Challenged,” arguing that the signal from the alleged gravitational waves was too weak to be significant, studies suggest.... [T]he new analyses suggest that the twisting patterns in the CMB polarization could just as easily be accounted for by dust in the Milky Way.... [W]hen the dust is fully accounted for, the signal that can be attributed to gravitational waves either vanishes or is greatly diminished (Cowen, 2014, emp. added).

Theoretical physicist of New York University and the Institute for Advanced Study at Princeton, Raphael Flauger, examined the evidence and
concluded that “there’s no evidence for the detection of gravitational waves” (as quoted in Cowen, 2014, emp. added). Based on two independent analyses of the evidence, Nature concluded, “The astronomers who earlier this year announced that they had evidence of primordial gravitational waves jumped the gun” (Cowen, 2014, emp. added). In Nature, theoretical physicist and professor at Princeton Paul Steinhardt said that “serious flaws in the analysis have been revealed that transform the sure detection into no detection” (2014). In an October follow-up, Nature reported in an editorial titled “Dust to Dust,”

More than six months after the initial announcement that scientists had found evidence of gravitational waves—echoes of the Big Bang itself—the claim is hanging by a thread. Subsequent analysis showed that much of the signal could have been contaminated by galactic dust. The predictions of Nobel prizes for the team have faded. The champagne has gone flat. Extraordinary claims, as the saying almost goes, demand more scrutiny than usual to make sure they stand up (2014, emp. added).

The other major science news magazines gradually weighed in as well, distancing themselves from the claims made by the researchers. In June, New Scientist had conducted an interview with Andrei Linde, who is credited as one of the originators of cosmic inflationary theory. Linde said “they were a bit over-optimistic, and claiming the discovery of gravitational waves may have been premature” (as quoted in Schilling, 2014, emp. added), although he was quick to allege that the growing skepticism about the gravitational waves discovery in no way disproves his theory of cosmic inflation. Then in October, 2014, New Scientist reported that the data results from the Planck telescope “suggest that dust could indeed account for the pattern BICEP2 detected” (Slezak, 2014). The article, titled “The Rise and Fall of Cosmic Inflation,” stated, “Inflation is dead, long live inflation! The very results hailed this year as demonstrating a consequence of inflationary models of the universe... may now do the exact opposite. If the results can be trusted at all, they seemingly suggest inflation is wrong” (Slezak, emp. added). David Parkinson of the University of Queensland in Australia studied the waves to determine if they were the correct kind of waves to fit inflationary theory and discovered that they were not. “Contrary to what the BICEP2 collaboration said initially, Parkinson’s analysis suggests that the BICEP2 results, if legitimate, actually rule out any reasonable form of inflationary theory. ‘What inflation predicted was actually the reverse of what we found,’ says Parkinson” (as quoted in Slezak, emp. added). Not good for the Big Bang Theory, which relies on inflation to fix the Horizon and Flatness problems inherent in naturalistic cosmological theories.

In September, American Scientist chimed in, reporting that cosmologists say the much-heralded claim may have been premature. The findings, if true, would provide the first direct observational evidence for cosmic inflation, a theory that posits that the universe expanded exponentially during the first fractions of a second of its existence. New observations indicate that the team may have underestimated polarization from relatively nearby dust in our galaxy. Some or all of the signal originally attributed to primordial gravitational waves could be due to effects of local dust (Burke, 2014, emp. added).

Also in September, Science ran an article titled “Evidence for Cosmic Inflation Wanes,” with the sub-title, “The biggest result in cosmology in a decade fades into dust” (Cho, 2014, emp. added). In the issue, Princeton
cosmologist David Spergel said, “We’ve gone from ‘They can’t prove that it isn’t dust’ to ‘It’s probably dust’” (as quoted in Cho). Cosmologist at Johns Hopkins University in Baltimore, Maryland Charles Bennett, mercifully said, “They just got overenthusiastic, but it’s tough to know when you really have something” (as quoted in Cho, emp. added).

Nature, New Scientist, American Scientist, Science, and finally, Scientific American jumped into the fray, reporting in October concerning the alleged gravitational waves discovery that in the intervening months, the Planck satellite has reported new measurements that indicate the Milky Way may contain more dust than assumed by the BICEP2 team. Several groups have...concluded that it is possible that dust could reproduce all (or most of) the claimed BICEP2 polarization signal. Although these developments have dampened the exuberance of many in the physics community regarding the BICEP2 result, the BICEP2 team stands by its estimates—but it now admits that it cannot rule out a dust explanation (Krauss, 2014, p. 66, emp. added).

The printers were relatively silent over the next few months until late January, 2015, when Nature announced the official demise of the gravitational waves discovery under the title, “Gravitational Waves Discovery Now Officially Dead” (Cowen, 2015, emp. added). The team of astronomers that thought they had found the waves withdrew their claim, acknowledging that what they thought was gravitational waves from the Big Bang “can be entirely attributed to dust in the Milky Way rather than having a more ancient, cosmic origin” (Cowen, emp. added).

WHAT CAN BE LEARNED FROM THIS DEBACLE?

“IT was fun while it lasted,” New Scientist reported in February (McKee, 2015), but what do we learn from the bumpy ride? At the risk of beating a dead horse, let us say yet again: the modern scientific (i.e., naturalistic) community and the liberal media are consistently rash in their claims to have found evidence for naturalistic theories, and sadly, the general populace is quick to believe whatever they say. By the time the retraction is made, the damage is done. Mainstream Americans, whose attention spans are shockingly short due to the many distractions in our lives, have already moved on, believing that the truth has been officially determined. Many times, the “truth” being proclaimed is contrary to the Bible. The result: more and more individuals distrust the Bible, when all the while, the story that instigated the disbelief was wrong in the first place.

Even the evolutionary scientific community has had to admit its rashness in this instance. In September, 2014, Science reported, “A beleaguered claim that appeared to reveal the workings of the big bang may instead say more about how science is done in an age of incessant news coverage” (Cho). Science, which was one of the first to announce the alleged discovery, proceeded to pass the blame to the researchers. “Some researchers say the BICEP team made its result seem much stronger than it was by announcing it in a press conference and a press release that proclaimed the ‘first direct evidence of cosmic inflation’” (Cho). The BICEP2 team returned fire, arguing that they “felt pressure from the media to stake a definite claim, [University of Minnesota, Twin Cities, cosmologist Clement] Pryke says: ‘They’re trying to translate this into something that the public can understand, and they want a yes or no’” (Cho). In line with what we have long argued, Steinhardt concurred: “The sudden reversal should make the scientific community contemplate the implications for the future of cosmology experimentation and theory” (2014). Chiding the irresponsibility of the scientific community and the media for their rashness in reporting the gravitational waves discovery, he admonished that next time, announcements should be made after submission to journals and vetting by expert referees. If there must be a press conference, hopefully the scientific community and the media will demand that it is accompanied by a complete set of documents, including details of the systematic analysis and sufficient data to enable objective verification (2014).

We are not holding our breath that the scientific community will listen to his admonitions. First, it is critical that researchers and media gain attention for their discoveries or stories if they want to gain grant money, Nobel Prizes, or Pulitzers (and fame). And second, if solid, empirical evidence were required for every claim made by naturalists, the majority of evolutionary biological information would cease to exist, as well as all of Big Bang cosmology, modern paleoanthropology, and uniformitarian geology. Nature, acknowledging the blunder by the media in how the supposed discovery was handled, but simultaneously claiming innocence, reported a meeting in October of
After citing the official retraction by the BICEP2 team, *New Scientist* summarized the state of Big Bang inflation as it currently stands:

The discovery of the apparent gravitational waves was hailed as the “smoking gun” for a theory that the infant universe experienced an epic growth spurt known as inflation. Physicists popped corks in elation and dreamed of a Nobel prize. But 11 months later, this smoking gun has itself gone up in smoke, and researchers are nursing a hangover.

“We are pretty much back to where we were before,” says Alan Guth of the Massachusetts Institute of Technology, who proposed the theory of inflation in 1981 (McKee, 2015).

So where were we before?

In the midst of the fray in 2014, Paul Steinhardt, “who helped develop inflationary theory but is now a scathing critic of it” (Slezak, 2014), wrote a stinging critique of inflation and its alleged evidence from the gravitational waves. He argued that “[p]remature hype over gravitational waves highlights gaping holes in models for the origins and evolution of the Universe” (Steinhardt, 2014). He said,

The BICEP2 incident has also revealed a truth about inflationary theory. The common view is that it is a highly predictive theory. If that was the case and the detection of gravitational waves was the “smoking gun” proof of inflation, one would think that non-detection means that the theory fails. Such is the nature of normal science. Yet some proponents of inflation who celebrated the BICEP2 announcement already insist that the theory is equally valid whether or not gravitational waves are detected. How is this possible? The answer given by proponents is alarming: the inflationary paradigm is so flexible that it is immune to experimental and observational tests…. [T]he paradigm of inflation is unfalsifiable…. [I]t is clear that the inflationary paradigm is fundamentally untestable, and hence scientifically meaningless (2014, emp. added).

And that, folks, is the state of inflationary theory—and, we might add, the Big Bang Theory, upon which it rests.

**REFERENCES**


Since their discovery in 2008, we have been responding to the waves of media hype over the Australopithecus sediba fossils—claimed to be pieces of two individuals thought to be representative of the missing link between the Australopithecines and the Homo genus (cf. Butt, 2010; Miller, 2012a; Miller, 2012b). The media proclaimed the fossils to be evolutionary “game changers” (Potter, 2011), the “first of our kind” (Wong, 2012), and “strong confirmation of evolutionary theory” (Potter). As we predicted, enough time has now gone by for further study to be done on the fossils, and the hoopla over the find seems to have all but disappeared.

In fact, once again, a complete 180 degree turnaround is underway. An article appearing in New Scientist in 2014 started with the sentence, “One of our closest long-lost relatives may never have existed. The fossils of Australopithecus sediba, which promised to rewrite the story of human evolution, may actually be the remains of two species jumbled together” (Barras, 2014). Ella Been of Tel Aviv University in Israel studies the spines of ancient hominins and ran across a paper in Science magazine that assessed the spine of sediba. After conducting her own study, Yoel Rak (also of Tel Aviv) and she “conclude that there are not two but four individuals” represented by the sediba fossils—separate individuals whose bones were mixed up during the (catastrophic) event that began the fossilization process (Barras).

They presented their study at a meeting of the Paleoanthropology Society in Calgary, Canada in April, 2014. This revelation, once again, highlights how easy it is for evolutionists to be wrong in their conclusions about fossils, especially considering that their conclusions are based on “meager evidence” (Wong, p. 31), like a “toe bone here or a jaw there” (DiChristina, 2012, p. 4).

Recall from our last article addressing sediba that Lee Berger, the evolutionary paleoanthropologist of the University of Witwatersrand in South Africa who discovered the sediba fossils, chided the standard practice in the paleontological community of trying to draw too much information from single, isolated bones. The sediba skeletons were thought to be more complete than typical fossil finds (even though the sediba skeletons were nowhere near being even 50% complete). Berger argued that if any of the bones he found had been found isolated, as is the typical scenario in fossil finds, completely different conclusions would have been drawn about the skeletal anatomy. He said, “Sediba shows that one can no longer assign isolated bones to a genus” (as quoted in Wong, p. 34). Ironicaly, now even his discovery, which was thought to be more complete, has also apparently been shown to be inadequate in determining the anatomy of an ancient skeleton. His assessment appears to have fallen victim to the same erroneous practice in paleontology that he chided. To make matters worse, according to the New Scientist article, “Berger’s latest work hints that the young male’s vertebrae may show signs of disease. If so, they are not representative of the species” (p. 11). That would mean that the sediba fossils cannot even be used as evidence of a transitional species, since the normal anatomy of the species would remain unknown.

The fossil record should be filled with billions of transitional fossils if Darwinian evolution actually occurred, but as we have highlighted time and again—and even many of the evolutionists themselves frequently admit—the evidence for the evolution of humans from an ape-like ancestor is lacking. The fossil record continues to support what creationists predict to be the case if the biblical model is true. God created the original “kinds” (Genesis 1:21,24-25) of creatures, and only diversification within those kinds has occurred over time. Believing that we evolved from a single-celled organism billions of years ago amounts to a wild, irrational leap.

REFERENCES
Summer Reading Ideas

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For example, eye color in humans results from the combination of specific versions (called alleles) of at least two different genes. More modern definitions have linked the idea of a gene to a sequence of DNA that is used to produce a protein. However, even this fails to capture the full idea of what a gene is since a number of DNA sequences are functional (and influence phenotype) without producing a protein product.

Applying this understanding to the claims being addressed above, it should be noted that the use of the word “gene” is misleading at best. The “genes” in some of the above questions are actually part of the sophisticated network of protein-coding and non-protein coding genes involved in body plan development (i.e., that control the development of structures and physical features while an organism is developing). These genes participate in an impressively well-orchestrated ballet that controls the location of body structures in embryos during development. So, there really aren’t specific “genes for legs” or “genes for tails.” Instead, alteration of the temporal and spatial presence of the
protein products of development-regulating genes will alter the physical structures of a developing embryo. Second, genes involved in body plan development are important to multicellular organisms, and there are several genes involved in development that have homologous (similar) genes that are present in very diverse sets of organisms. For example, the homeobox or HOX genes are a family of genes that are found in a wide array of organisms. These genes are involved in body plan development and slight changes to these genes can have extreme consequences on the structure and viability of an organism (McGinnis and Krumlauf, 1992, pp. 283-302; Mallo, et al., 2010, pp. 7-15). The tight regulation of HOX genes is evident from experimental results showing that mutations in HOX can alter body plan and neural development and even cause cancer (Philippidou and Dasen, 2013, pp. 12-34; Quinonez and Innis, 2014, pp. 4-15). This function underscores the fact that these genes are critical and must be precisely regulated in order for body plans to develop properly. While mutations in HOX genes can lead to extra limbs or other features, the additional features often are non-functional and are usually detrimental to the organism.

Third, HOX genes and other genes involved in development are often hailed as evidence of evolution by common descent. This is because HOX homologs are found in many different organisms, which is interpreted as evidence that these genes arose during evolution and passed from one life form to the next. However, it is proposed that some genes (including genes involved in growth and development) evolved independently multiple times (Irimia and Garcia-Fernandez, 2008, pp. 1521-1525). In other words, some homologous genes present in unrelated organisms arose independently, rather than from a common ancestor. According to this interpretation, evolution solved some of the same problems several times (i.e., in different lineages, independently). Rather than suggesting that these genetic discordances are evidence of common design, the concept of convergent evolution was invented to “explain away” these coincidences (Bergman, 2001, pp. 26-33). While convergent evolution is a convenient concept, it does not explain how these genes or sets of genes evolved once, let alone multiple times independently (Meyer, 2013).

So, what should we make of these claims? Let us examine each one briefly to understand what the claims are and what the evidence is. First, do whales have “genes for legs”? While whales have developmental genes just like other mammals, they do not have specific “genes for legs.” In fact, the only reason that “legs” are even mentioned is because of the presumed evolutionary ancestry of whales. In other words, why not call these “genes for extra fins/flippers”? Further, it should be noted that there are a few extreme cases that have been documented in whales where bones around the pelvic region have been expanded and/or additional bones are present (Andrews, 1921, pp. 1-6). Contrary to some claims, the pelvic region in whales is not a vestigial structure. Rather, the bones in this region anchor the reproductive organs (Wieland, 1998, pp. 10-13; Dines, et al., 2014, pp. 3296-3306). Cases of “growths” or extra bones, while interesting, do not mean that...
whales once had legs. Is it possible that these occurrences are within the natural genetic variation of organisms? Take for example, the more recent story of a dolphin with a second set of fins (Wieland, 2006). Perhaps this is an example of our lack of understanding of the natural genetic variation found within these creatures? Again, the only reason that these structures are claimed to be “legs” is because of the evolutionary interpretation placed on top of the data. The fact that these anomalies exist does not negate Creation in any way. Rather than supporting common descent, these examples of variations and mutations really suggest a common design, including common developmental circuits built into the genomes of organisms (Ham, 2006; Sarfati, 2014).

Second, humans do not have genes for tails. This claim arises from the presumption that we evolved from ape-like ancestors and is based on two observations. First, there are newborns that have fatty tissue appendages on the rear of the child, which may appear tail-like. However, these appendages do not display characteristics of a tail in structure or function (Lamb, 2007). Further, these incidences are clearly the result of mutation—breaking gene function rather than developing something new. The second source of this claim comes from the appearance of a developing human embryo. During embryonic development, it may appear like humans have a tail, but this actually develops into the spinal column and coccyx. The coccyx is no longer considered a vestigial organ (Bergman and Howe, 1990, p. xii). So, there never is a “tail” even as an embryo. But what of the cases of extra bones beyond the coccyx?

There are some documented cases of this, but this only supports the idea that there is variation among humans and not that humans have leftover “tail genes.” [For a more detailed discussion of “human tails,” see a series of articles by Casey Luskin (2014).] Further, there are numerous examples of anatomical variation among humans including cervical ribs, extra fingers or toes, absent muscles, and even differences in the branching pattern of the aorta (Moore, et al., 2014). Each of these examples suggest that anatomical variation is normal and highlights the differences in development that result from an individual’s unique genetic make-up.

Third, regarding humans having the genes for egg yolk, this claim is weak at best. The claim originates from a single published report suggesting that humans have remnants of a gene used to make a protein found in egg yolk (Brawand, et al., 2008, p. e63). When the data is examined, the “remnants” are a few very short sequence segments—most of which contain multiple mutations when compared to the sequences found in chickens [see supporting information in (Brawand, et al.)]. Unlike the claim that “humans have genes for egg yolks,” we in fact have a few short sequences (sequences represent portions of two to three exons out of 35 exons in the VIT1 gene) which poorly correspond to fragments of the rather large genes for these proteins. In fact, I would suggest that these sequence correspondences really are not remnants at all. Some of the sequences in question are actually part of other human genes. So, instead of being remnant sequences, these are more likely coincidental sequence similarities.

Fourth, the claim that birds have genes for teeth likely centers around a 2006 study of a mutation in chickens called talpid2, which is a lethal recessive mutation that causes several developmental defects in chick embryos (Harris, et al., 2006, pp. 371-377). This mutation has been studied for over 60 years, and the 2006 study suggested that embryos with this mutation appeared to be developing a tooth-like structure before death (Harris, et al.). Evolutionary interpretations of these findings suggest that this mutation must indicate that there is some vestigial genetic programming for tooth development leftover in the genomes of chickens (“Mutant Chickens Grow Teeth,” 2006). But important points need to be made regarding those interpretations. First, the talpid2 mutation is known to impact the developmental gene called sonic hedgehog (shh), which plays critical roles in body plan patterning and development. Thus, it is no surprise that this mutation may cause drastic changes in body structure. Second, this mutation is lethal; so, clearly, it does not offer any benefit for the organism. Third, at the time of the 2006 study, the actual gene involved in this mutation was unknown. However, that gene has now been identified as C2CD3 (Chang, et al., 2014, pp. 3003-3012). This study noted that the actual function of the protein produced from this gene is not known, but they provided evidence that a deletion within this gene caused the talpid2 phenotype (Chang, et al.). Interestingly, this gene is somehow involved in production of cilia and the protein product is detectable in cells. Thus, far from being a “gene for teeth,” this gene appears to be
In fact, the presence of mutations after the Fall, with many genetic degeneration anticipated in the modern concept of the Creation model (Sanford, 2008). Living on Earth after the Fall, with many generations of mutations already present in the genomes of organisms around the world, we must recognize that genetic degeneration continues to remind us of both the consequences of the Fall and the hope we have in Christ our Redeemer Who will clothe us with a new body (Philippians 3:21).

REFERENCES

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Dave Miller

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