**4 – Implications of the Big Bang**

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[1] The Big Bang Theory, number 4

[2] We have learned that the Big Bang Theory originated with observable data. / After noticing the red shift, scientists interpreted that data to mean that galaxies were speeding away from our earth.

[3] Extrapolation back in time led to the big bang theory

[4] Based on this theory, / scientists predicted the existence of cosmic microwave background radiation / and the ratio of hydrogen to helium and other lighter elements. / As it turned out, the observable data matched these predictions.

[5] However, there is no observable data that can explain the source of all the energy contained in the original singularity, / what caused the universe to begin expanding in the first place, / or how the particles which formed after the big bang were able to coalesce into matter.

 [6] In the final presentation of this series, we will explore a few interesting implications of the Big Bang theory.

[7] Scientists agree that the evidence points to an absolute beginning of the universe. / But, for many who had previously accepted the idea of an eternal universe, this was unsettling.

[8] According to an ancient logical argument, everything that has a beginning / has a cause. /So, if the universe has a beginning, /it would have a cause.

[9] If the universe has a cause, / that opens the door to the possibility of a Creator, which is why some scientists found the Big Bang unsettling. The idea of a Creator would be incompatible with their naturalistic worldview.

[10] Implication number two involves the precision with which the expansion happened. / If the particles which formed after the big bang stayed too close together, a giant black hole should have formed. / If the particles hadn’t been close enough, they would not have been able to coalesce into matter and eventually form galaxies.

[11] Scientists marvel at the fact that the particles did manage to get close enough to form matter / without forming a black hole. / The expansion of the universe in precisely the right way suggests design and purpose.

[12] The third implication we will look at involves the relationship between science and Scripture. / At least one possible similarity between the big bang theory and creation was noticed by both scientists and theologians. / Astronomer Robert Jastrow described it this way: “the essential element in the astronomical and biblical accounts of Genesis is the same; the chain of events leading to man commenced suddenly and sharply, at a definite moment in time, in a flash of light and energy.”

[13] Influenced by the potential similarities between creation and the new scientific theory, the Catholic Church adjusted its position on origins. Speaking to the Pontifical Academy of Sciences, Pope Pius the 12th in 1951 and Pope John Paul the 2nd in 1996 indicated that the Big Bang theory does not conflict with the Catholic concept of creation.

[14] Speaking to the same Academy in 2014, Pope Francis said “The Big Bang does not contradict the divine act of creation; rather, it requires it.”

[15] To evaluate whether these statements are true or not, Christians need to ask how the Big Bang theory matches the Bible’s description of creation, which might not be quite as simple as it sounds.

[16] Just like scientists use the tools of their trade to gather and interpret data, / Bible scholars use a different set of tools to interpret the meaning of the biblical text, and not everyone reaches the same conclusion.

[17] Those who believe the Bible teaches that the entire universe was created during the six-day creation week / believe there is a time problem with the Big Bang theory.

[18] According to the Chronogenealogies in Genesis 5 and 11—described in these two articles by Gerhard Hasel--

[19] …creation happened several thousand years ago, / not billions of ago as the Big Bang theory claims.

[20] Dr. Richard Davidson offers insights about the creation account in his article. / He affirms the literal, historical nature of Genesis 1 and 2; / affirms that God created “the heavens and the earth” out of nothing at the time of their absolute beginning; / recognizes that the earth was unformed and unfilled at first; / and affirms that the forming and filling happened during six successive, literal, 24-hour days. / Although he rejects the active gap theory, / he concludes that the biblical text allows for either the “no gap” or the “passive gap.”

[21] In the “no gap” option, Genesis 1:1-2 are on day one. / All the raw materials are included in the first day of the seven-day creation week. / In this scenario—where the entire universe is created during creation week—there would be a conflict with the billions of years that accompany the Big Bang theory. / In the “passive gap” option, Genesis 1:1-2 go together but are separated from verse 3 by a gap. / The raw materials in their unformed unfilled state were created before—perhaps long before—the seven days of creation week. / If this is the case, there might not be a time conflict with the Big Bang theory.

While the author prefers the passive gap theory, he acknowledges a possible openness of Genesis 1:1-2 that allows for either option.

[22] However, even if there isn’t a definite time problem, / there is still a danger in relating our interpretation of Scripture too closely with the latest scientific theory, even when they seem to have similarities.

[23] Remember the take-home lessons from the first presentation in this series. / All scientific theories are tentative. / If we have associated our interpretation of Scripture with a particular scientific theory, / what happens when that theory is displaced by another theory?

[24] An interesting example from history illustrates this point. During Galileo’s lifetime, a geocentric universe—where the sun orbits the earth—/ was both standard science / and orthodox Christian belief. / Before Copernicus and Galileo, there had been no reason to question it.

[25] But the new scientific claim that the earth turns on its axis and revolves around the sun instead, seemed to create a conflict.

[26] It appeared that the heliocentric model of the universe conflicted with verses from the Bible that seemed to indicate that the earth moved but the sun stood still.

[27] As scientists continued to collect more data, it was eventually determined that the earth does, in fact, orbit the sun. / Because their interpretation of Scripture was so closely tied to the science of the day, / the rejection of the old model in favor of the new one shook the faith of some in the reliability of the Bible.

[28] Bible scholars eventually realized that the idea of a geocentric universe actually came more from Greek philosophy than from the Bible itself, but for some, the damage to their faith in Scripture had already been done.

[29] We can learn from this story that it is not wise to base interpretations of scripture on the latest scientific theory.

[30] Let’s review the three implications we’ve looked at: / Number 1: The evidence points to an absolute beginning. This makes some scientists uncomfortable because that could suggest a Creator.

[31] …which is exactly what the Bible says.

[32] Number 2: The precision with which the universe expanded also suggests design and purpose.

[33] …which is also consistent with what the Bible says.

[34] But because history shows us that all scientific theories are tentative, it’s best not to tie our interpretations of Scripture to the latest scientific theory, including the Big Bang theory.

[35] We should continue to learn all we can about our universe, though, and the Bible says that as we do, we can understand more about the glory, / righteousness, / and faithfulness / of our Creator God.