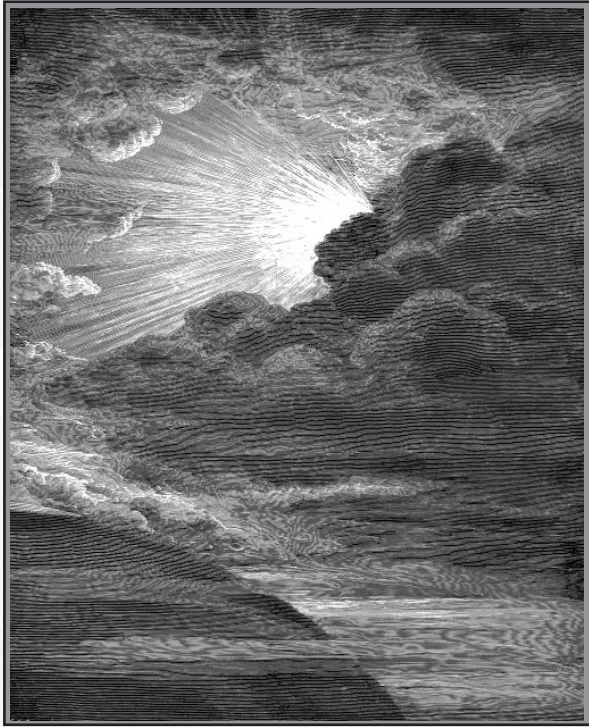


On the Age of the Universe

an essay by Aryeh Kaplan, 5757



The following is an excerpt from "Immortality, Resurrection, and the Age of the Universe", by Rabbi Aryeh Kaplan (Copyright 1993, Association of Orthodox Jewish Scientists, ISBN 0-88125-345-6).

The Talmud (Sanhedrin 97a) says, "The world will exist for 6,000 years, and in the 7,000th year, it will be destroyed." As of this writing (March 1993), the Hebrew year (dated from the creation of Adam and Eve) is 5763. Many Jews, including some rabbis, hold that the universe is 5,763 years old. The view of the scientific community - that the universe is roughly 15 billion years old, give or take a couple billion - is dismissed in one of two ways.

The first approach is to say that the science is faulty. Even the scientists will readily admit that science is constantly improving itself, and today's conventional wisdom becomes tomorrow's superstition. Science once held, for instance, that the Earth was stationary and that the Sun, the planets, and the stars revolved around it. Perhaps one day the Big Bang Theory will likewise be scrapped. The second approach is to say that G-d created the universe looking old. There is no free will without temptation; in this case, the temptation would be to discard the Scriptural view in favor of what seems true to our eyes. In similar fashion, Adam and Eve would have looked like mature adults when they were one minute old.

There is, however, another approach: the scientists are right (or at least close), and Scripture is being misinterpreted. It should be noted from the outset that the six days of Creation Week cannot possibly be literal 24-hour days, because the Sun wasn't created until the fourth day (Genesis 1:14-19), and there cannot be literal evenings and mornings as we know them without the Sun.

"Sefer Ha-Temunah", a first-century Kabbalistic book by Rabbi Nehumia ben Ha-Kanah, expresses the view - not universally held - that the 7,000 years of Sanhedrin 97a run parallel to the Jewish Sabbatical cycle, in which the fields are planted for six years and left unplanted in the seventh (Leviticus 25:4). After seven Sabbatical years comes the Jubilee year (every 50th year), whose laws are similar to those of the Sabbatical year (Leviticus 25:11). The 7,000 years are thus one Sabbatical cycle within the Jubilee cycle, and the universe must exist for a total of 49,000 years. (Yes, I know that's not 15 billion years. I'm getting

to that.) There is a difference of opinion regarding which Sabbatical cycle we are currently in. Derush Ohr Ha-Hayim says that we are in the second cycle, whereas Livnat Ha-Sapir says we're in the seventh. According to these opinions, then, the world would have been, respectively, either 7,000 or 42,000 years old when Adam and Eve were created.

In the 13th century, Rabbi Isaac of Akko made the insight that, since Sabbatical cycles existed before man was created, time before Adam and Eve must be measured in divine years, not human years. Psalm 90:4 says, "For a thousand years in thy sight are but like yesterday when it is past, and like a watch in the night." Rabbi Isaac of Akko - who held like Livnat Ha-Sapir, that we are in the seventh Sabbatical cycle - therefore took the above figure of 42,000 years and multiplied it by 365,250 (he was using a 365.25-day year) to get 15,340,500,000 years for the age of the universe when Adam was created. This is roughly in line with what modern science is saying (15 billion years, give or take a couple billion), and Rabbi Isaac of Akko came up with it in the 13th century. (Today we know that there are 365.242199 days in a year. Thus, on the secular calendar, the leap year is withheld in years ending in 00, unless the year is also divisible by 400. Rabbi Isaac of Akko's calculation is thus refined to 15,340,172,358 years.)

A problem remains, however, regarding the age of man. According to all opinions, the 5,763 years since the creation of Adam and Eve must be measured in human years. But scientists tell us that *Homo sapiens* (our species) has been around for at least 100,000 years, and perhaps as long as 500,000 years.

B) says that there were 974 generations before the creation of Adam and Eve. This is derived from Psalm 105:8 ("He has remembered His covenant forever, the word which He commanded to a thousand generations"). If one follows through the genealogies from Adam down the line to Moses (the "begats"), one finds that Moses was the 26th generation from Adam, implying that there had previously been 974 generations. These pre-Adamic humans weren't people as we know them - Adam and Eve were the first creatures made in G-d's image, with the power to make moral choices - but they resembled us closely enough that the Talmud includes them in our species. Also, people lived much longer before Noah's Flood - Methuselah set the all-time record of 969 years - and they also had children well into their hundreds. If this was true of the pre-Adamic humans as well - and I freely grant that nothing in Scripture suggests this - then we would arrive at a figure of well over 100,000 years for the Biblical age of man.