

Dinosaurs and Woolly Mammoths - is there a Torah Viewpoint?

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Dinosaurs and, to a lesser extent, woolly mammoths are exciting and appealing to children and stimulate the imagination of young minds. The Museum of Natural History in Manhattan is visited by many Jewish day schools, yeshivas, and seminaries. In the spring of 2016, the Museum introduced a new exhibit: the Titanosaur, a gigantic dinosaur with a length of 122 feet and neck length of 39 feet [1]. What is the Orthodox Jewish viewpoint towards these long extinct creatures? In the “Ask the Rabbi” section of the on-line site, Ohr Somayach [2], the following question was asked. “A friend recently asked me how Orthodox Judaism deals with the issue of scientific proof of dinosaurs’ existence. Is there an explanation to be found in Torah? Your answer or explanation would be greatly appreciated as we are both teachers in a Hebrew day school and the children argue amongst themselves about whether dinosaurs did or did not really exist.” This article discusses, within a Torah framework, the occurrence of these creatures. In the Torah, there is no mention of these creatures, nor should there be, as these animals are extinct (*i.e.*, *kasbrus* is not an issue), have no relevance to *halachic* Judaism and the performance of *mitzvos*, and their mention could not have been understood by earlier generations, as the fossilized skeletons of these gigantic creatures were found only within the past 200 years.

Current scientific thinking is that dinosaurs appeared on this planet about 230 million years ago, were the dominant animal life form for 135 million years, and abruptly disappeared about 66 million years ago. [Note, there are no anti-Torah comments in this article and the number of years noted above do not refer to life on our present world, which began 5,777 years ago, but rather to life on a prior, earlier form of this planet. Do not panic; be patient, as this will be explained, as it is based on a *midrash*.] Dinosaurs inhabited every continent (terrestrial dinosaurs), the air (flying dinosaurs), and the oceans (marine dinosaurs); some were herbivores and others were carnivores. Biologically, dinosaurs are classified as reptiles, exhibiting egg laying and nest building. Some dinosaurs were bipedal, others were quadrupeds, and still others were able to shift between these stances. Size varied as well: some dinosaurs were very small, about 20 inches in length, and others were huge, reaching lengths of 130 feet and heights of 59 feet [3].

Dinosaurs, and most other species of that epoch, suddenly and abruptly disappeared and became extinct. The dominant hypothesis, known as the “impact theory,” is that a mass extinction was triggered by a giant, extremely

bright meteorite (*i.e.*, a fireball), 5 to 15 kilometers in diameter, impacting upon the planet in the vicinity of the Yucatan Peninsula in southeastern Mexico, creating the Chicxulub Crater, approximately 180 kilometers in diameter. Death was caused by extreme heat followed by extreme cold. First, impactation of the meteorite directly generated an unusual heat wave. Secondly, impactation caused the ejection of much particulate matter into the atmosphere, which reflected thermal solar radiation and led to a world-wide rapid cooling. Dinosaur extinction was quick, occurring within hours [3]. Recently, it was suggested that dinosaurs were already suffering from climate changes triggered by volcanic eruptions and impactation by the meteorite was the *coup de grace* leading to their mass extinction [4].

Yet planet Earth, although affected by volcanic eruptions and impactation of a giant asteroid, was still intact, albeit greatly modified. *HaShem* was preparing this planet eventually for mammalian inhabitation and thereafter for human inhabitation. As long as dinosaurs dominated the Earth, there was no possibility for large mammals or human beings to exist. Only after the dinosaurs were wiped out could mammals flourish to become the dominant species. Dr. Luis Alvarez, who proposed the impact theory, stated, “From our human point of view, that impact was one of the most important events in the history of our planet. Had it not taken place, the largest mammals alive today might still be the rat-like creatures that were then scurrying around trying to avoid being devoured by dinosaurs” [5].

Following the extinction of dinosaurs, large mammals became the dominant species. Of interest to this article are the mammoths, close relatives of modern-day elephants. Mammoths are quite large, reaching heights of 13 feet, with extremely long tusks that have a characteristic curve; the tusk length was usually the same length as the mammoth’s height. During the last ice age, mammoths lived in northern Eurasia and North America. One of the last species of mammoth was the woolly mammoth, adapted to live in cold climates by a layer of fur covering all parts of the body. The last habitats of woolly mammoths included Siberia and Alaska. Interestingly, many frozen specimens of woolly mammoths have been discovered. Cave paintings depicting woolly mammoths were found and attributed to prehistoric man. Whereas dinosaurs and prehistoric men were not together in the same epoch, there is evidence that woolly mammoths and prehistoric men were contemporaries [6, 7].

Mammoths existed about 55 million years ago and became

extinct over 10,000 years ago. The reasons accounting for extinction of mammoths vary and include a warming trend, accompanied by glacial retreat and rising sea levels, shrinkage of habitat, susceptibility to infectious disease, and drowning (*e.g.*, in Siberia, while traveling to the Northern River, many mammoths broke through the ice and drowned). Lastly, mammoths may have been hunted by Neanderthal prehistoric men [6, 7].

Our knowledge of dinosaurs and mammoths comes from findings of their remains, which for dinosaurs include their fossilized skeletons, eggs, and footprints and for mammoths include their fossilized skeletons, tusks, and frozen specimens. A brief discussion of fossil formation is needed, as it will help elucidate the concept of the existence of worlds prior to our present world. Fossils are found in the outermost and thinnest layer of the Earth, termed the crust. The Earth's crust is composed primarily of sedimentary rock, formed when sand and silt collect and harden. Over geological time, thick layers of sedimentary rock are formed, termed strata. Let's assume that many, many years ago a dinosaur died in an environment that had a lot of moving sediment. The soft tissues of the dinosaur decomposed, leaving the harder parts, such as the skeleton. The organic constituents of the skeleton eventually decomposed, leaving the inorganic constituents composed primarily of calcium salts. Water carried iron and calcium phosphate into the dinosaur's porous and fragile bones, causing some minerals to precipitate. Gradually, the dinosaur bone became rocklike. Over the course of time, sediment around these reinforced bones became sedimentary rock, thereby preserving the fossilized skeleton. Sedimentary rock may also hold "trace fossils," or evidence that a creature once existed. Dinosaur footprints are a type of trace fossil, formed when the animal left its prints in soft, but sturdy, soil, creating a mold. Sediment filled the mold and, over geological time, both the mold and its filling hardened. When erosion removed the upper layers of rock, the preserved footprint was revealed [8]. Animals living in a common era would be found in common strata. None of the thousands of locations in which dinosaur fossils and footprints have been found have ever included human fossils or the remains of human civilizations. Similarly, none of the countless archeological excavations of ancient human civilization have ever included traces or records of dinosaurs. Dinosaurs clearly lived in a different era than humans [9].

No fossils of mammoths have ever been found in the same strata as the dinosaurs. It is clear that there was an age of dinosaurs distinct from an age of mammoths [9]. Preserved mammoths have been found in tar, *e.g.*, the La Brea Tar Pits in Los Angeles, CA. No remnants of dinosaurs are found in the Tar Pits. Another form of fossilization applicable to mammoths is freezing, a process which can preserve the entire body. Well-preserved mammoths, still with their hair, skin, and intact organs, have been found in frozen tundra

and icy crevasses of Siberia [8]. As an aside, it is interesting to note that the bodies of mammoths found in the permafrost are well preserved, with identifiable cell nuclei. Currently, competing scientific teams in Japan, South Korea, and Russia are engaged in research to clone a mammoth [10].

Essentially, there are three major theories to explain the past occurrence of dinosaurs and mammoths on this planet. Based on the findings of fossilized bones of dinosaurs, Rabbi Menachem Schneersohn, the past Lubavitch Rebbe, presented two thoughts. Perhaps, dinosaurs existed over the past 5,776 years, died, and because of environmental conditions that differ from today, their skeletal remains underwent a rapid fossilization process. The second thought is that living dinosaurs never existed. Perhaps, "G-d created ready fossils, bones, or skeletons (for reasons best known to Him)." If so, "why did G-d have to create fossils in the first place? The answer is simple: we cannot know the reason why G-d chose this manner of creation in preference to another, and whatever theory of creation is accepted, the question will always remain unanswered. The question, Why create a fossil? Is no more valid than the question, Why create an atom?" [11].

Rabbi Naftali Berlin (Netziv) in *parshas* Noach (HaAmeik Davar; 7:23) suggested that dinosaurs roamed the world in the pre-*mabul* period. According to *Chazal*, animals in the antediluvian pre-*mabul* era mated outside their species, leading to the birth of different types of hybrid creatures, including the dinosaurs. The flood waters destroyed the dinosaurs and it was *HaShem's* intent that their bones remain buried for centuries, as a warning to future generations not to mate with different species. Rabbi Meir Leibush ben Yechiel Michel (Malbim commentary to Genesis 7:23) also suggested that dinosaurs lived in the era prior to the flood. Accordingly, although "they (*i.e.*, the dinosaurs) may have survived the action of the water, they were nevertheless eliminated from the face of the earth by the strong currents which carried them into the chasms that had been formed when the ground was split. They were absorbed and deposited thousands of cubits deep - and so completely that when Noach later left the ark, he found no traces of any animal remains, not even of those giant creatures which existed before the Flood." A weakness with the theory presented by the Netziv and the Malbim is that if dinosaurs died along with other animals and with human beings, then fossilized bones of dinosaurs would be found in the same sedimentary rock layers as fossils of other creatures. The fact that we do not find this is a strong indication that dinosaurs, large mammals, and human beings lived in different epochs [9]. Rabbi Brown [12] noted that the *mabul* cannot explain the numerous geological strata, each containing its unique blend of fossilized animals. As pointed out by Rabbi Slifkin [9], both the Malbim (1809-1879) and the Netziv (1817-1893) lived when fossilized dinosaur bones were just being discovered. If

they were alive today, with the abundance of fossilized dinosaur bones found, perhaps they would have presented a different explanation for the occurrence of dinosaurs on this planet.

The third approach is based on a *midrash* (Bereshis Rabbah, 3:7; 9:2; Koheles Rabbah 3:1.11;

Yalkut Shimoni Koheles Rabbah 968:3) that, according to Rabbi Avahu, prior to this world, *HaShem* created many other worlds and destroyed them, saying, “This one pleases Me, those did not please Me.” According to this thought, dinosaurs and woolly mammoths lived, independent of each other, in two of these prior worlds. The concept of prior worlds eliminates a controversy between Torah and science of the age of the universe. The Torah’s viewpoint is that, as of September 2016, our world is 5,776 years old, calculated from the creation of *Adam HaRishon*. However, according to the scientific viewpoint, our universe dates back 13.8 billion years, calculated from *Bereshis* (i.e., the Big Bang) and progressing through all the prior worlds that were created and destroyed (*boneh olamos umachrivon*) subsequent to the world that we now inhabit. Thus, depending upon your point of reference, both calculations are correct.

The concept of *boneh olamos umachrivon* was promulgated by Rabbi Israel Lipschitz (author of the commentary *Teferes Yisrael* on the Mishnah) in his *D’rush Or HaHayyim*, printed in the *Yachin u-Boaz* edition of the Mishnah, after Sanhedrin. Rabbi Joseph B. Soloveitchik [13], Rabbi Isaac Elchanan Theological Seminary, Yeshiva University, Rabbi Shlomo Aviner [14], Yeshivat Ateret Yerushalayim, Rabbi Yisroel Belsky [15], Mesivta Torah Vodaath, Rabbi Dovid Brown [12], Ner Yisrael, and, as cited by Rabbi Natan Slifkin [9], Rabbi Shalom Mordechai Schwadron (the Maharsham), Rabbi Samson Raphael Hirsch, and Rabbi Yehudah Yudel Rosenberg (author of the Talmudic work, *Yados Nedarim*) agreed with the approach of *boneh olamos umachrivon*.

Every Orthodox Jewish child is aware of the initial two verses in the Torah: “In the beginning G-d created the heaven and the earth. The earth was without form and empty...” Although there are some variations, basically most biblical commentators begin with this statement. However, Targum Onkelos, who comprised an Aramaic translation of the Torah, added the word “*b’kadmon*” (translated as “previously” or “earlier”) to the beginning of the sentence. Perhaps, Targum Onkelos’ addition of “*b’kadmon*” was a subtle hint to the *midrash* of Rabbi Avahu. Based on this Targum Onkelos, Rabbi Joseph B. Soloveitchik [13], translated the initial sentences of the Torah as follows. In the very beginning, long, long, long ago, *HaShem* created matter *yesh mei’ayin*, and from this He made many worlds and destroyed them. These worlds had physical and spiritual life (*shamayim va’aretz*), but then there was *tohu va’vohu* - desolation and confusion - when these worlds were destroyed and other worlds were created. After this introductory statement, the Torah then continued with the creation and description of our present world.

It should be noted, however, that not all Torah scholars concur with the above-noted interpretation of the *midrash*. For example, the Netziv (HaAmek Davar; Bereishis 7:23) concluded that dinosaurs could not have roamed in prior worlds, as according to his interpretation of the *midrash*, these prior worlds were totally destroyed, leaving no remnants. Thus, according to the Netziv, the fossilized dinosaur bones must have been from creatures that lived in our current world. Rabbi Slifkin [9] cited Rabbi Yaakov Yisrael Kanievsky, who suggested that, perhaps, the prior worlds were entirely spiritual in nature and even if they were physical, there would be no remnant in our universe. Rabbi Chaim Eliezar Shapira (the Rebbe of Munkatch) noted that *D’rush Or HaHayyim* contained statements that were “damaging views that tend towards heresy,” and suggested that this essay was forged by the son of Rabbi Lipschitz, yet published in his name. Citing Shemos Rabbah 1:2, “... that He created worlds and looked at them and they were not endearing to him, and He returned them to chaos and emptiness,” the Netziv stated that if neither vestige nor trace remained from these worlds, then dinosaur fossils could not be remnants from prior worlds.

The article will follow the thoughts of *Teferes Yisrael* and the concept of *boneh olamos umachrivon* as elucidated by Rabbi Belsky [15]. An English translation of the document composed by Rabbi Lipschitz is printed in “Immortality, Resurrection, and the Age of the Universe: a Kabbalistic View,” authored by Rabbi Aryeh Kaplan [16]. According to Rabbi Lipschitz, the scientific discoveries of fossilized dinosaur bones and of frozen mammoths were confirmatory of Jewish tradition, as these discoveries were proofs of the existence of the prior worlds that were created and destroyed. It is worthwhile to quote a few paragraphs authored by *Teferes Yisrael*.

“The spirit in man which yearns, which desires to uncover all hidden matters, to search out, like a weasel, the innards of the earth in the high mountains - the Pyrenees and the Carpathians, the Rocky Mountains in America, the Himalayas on the border of China - discovering that these mountains were formed by gigantic layers of rock which lie helter-skelter on one another with great and terrible force, hanging cliff-like one on another by a hairsbreadth, to the point at which it is impossible to imagine that this could come to pass except by a world-overturning revolution which once occurred by His hand, may He be blessed, Who reproves the earth and turns it over in a moment.

“Not satisfied with this, they dug several hundreds of fathoms into the deeps of the earth. They found four layers of earth, each above the other, each made up of a different sort of mineral, and between these layers they found fossils which indicate that the earth has been overturned and changed its surface four times. The creatures found between these layers are arranged in such a way that those which lie farthest from the surface are fashioned in a larger measure than those which lie in the next layer, and so to

those which lie in the second layer are larger than those which are to be found in the upper, most recent, layer, Moreover the diminution in size corresponds to a greater degree of perfection in the structures of the creatures found in the upper layers as compared to those in the lower layers. Natural scientists also write that evidence exists that the earth received a terrible blow from the southwest to the northeast, and that by this blow the earth was blasted and made desolate (*i.e.*, the impact theory).

“Likewise, in the year 1807, according to their reckoning, they found in Siberia, in the northern part of the earth, under the terrible ice which is ever present there, a great elephant [the wooly mammoth] (Fig. 1, 2), three or four times the size of those found today, and whose skeleton now stands in the Zoological Museum in Petersburg. Moreover, inasmuch as elephants cannot live in the extreme cold which dominates that region, this carcass indicates that by the blow which the earth received and by which it was blasted and disordered, this elephant, which once lived in a warm climate that could support elephant life, was carried to its current location by the mighty waves (*i.e.*, a cosmic upheaval), or that at one time the climate there was warm enough to support such animals. So too they have found in the depths of the highest mountains on earth, creatures of the sea which have fossilized and become stone.



Fig. 1. A wooly mammoth, illustration

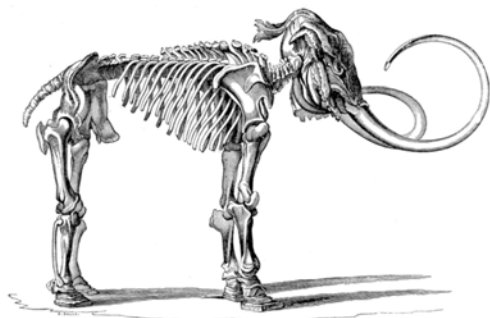


Fig. 2. Mammoth, skeleton

“We already know of the bones of a giant creature found in the depths of the earth around the city of Baltimore in

America, whose length is 17 feet, and whose height from the soles of its forelegs to its shoulders is 11 feet, and from its hindlegs to its back is 9 feet. Bones of this creature have been found in Europe too, and in the Harz Mountains scattered all around. This species has been named a mammoth.

“They have also found fossilized remnants of a creature they call iguanodon (Fig. 3), whose height was 15 feet and whose length was as much as 90 feet; from the character of its limbs, scientists have judged that it ate only grass. There is yet another species of animal called a megalosaurus (Fig. 4), which was only a little smaller than the iguanodon, but which was a hunter and carnivorous.



Fig 3. An iguanodon, illustration

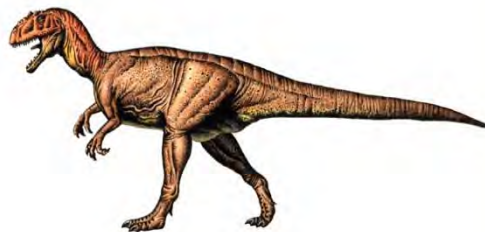


Fig. 4. A megalosaurus, illustration

“From all this it is clear that the teaching of the Kabbalists hundreds of years old, that the world has been destroyed and renewed over and over again, as many as four times, each time in a more perfect form, is shown in our own times to be just and true. We are now in the fourth world.” (Note, many paleontologists consider there to have been four eras, the Precambrian (unicellular organisms; simple multicellular organisms), Paleozoic (plants; amphibians, insects; reptiles), Mesozoic (dinosaurs, small mammals), and Cenozoic (wooly mammoths (ice age occurs); mammals; humans) [2]).

It is interesting to note that in the epoch just prior to our world, scientific research has indicated that there was an overlap between mammoths and prehistoric man (Neanderthals). These findings were unknown to the *Teferes Yisrael*. Yet, the *Teferes Yisrael* noted that prehistoric man (“pre-Adamites”) lived in epoch immediately prior to our

own world, specifically during the 974 pre-*Adam HaRishon* generations noted in the Talmud (Chagigah 13b, 14a; Shabbas 88b). He explained that these pre-Adamites “behaved egregiously” and were “banished from the world like thorns in the vineyard.” Thereafter, “the world was recreated in a more perfect fashion, it was fitting that the Torah be given to Adam of this cycle, for the world had matured to that point.”

Although the concept of *boneh olamos umachrivon* is accepted by past and present Torah scholars, there is little elucidation of the ramifications of that concept. Rabbi Belsky, however, provided several examples to elucidate the meaning of what was meant that *HaShem* built and destroyed many worlds prior to this one [15]. He noted that according both to Ramban (Bereishis 1:1) and to current scientific thought, the universe originated from an infinitesimally small speck, called “*tobu*,” consisting of an unimaginable concentration of pure potential energy, maintained at an extremely high temperature. The speck contained all the potential, formless elements of *shamayim va’aretz*, Heaven and earth. *HaShem* further imbued the primordial speck with an elemental structure, called “*bohu*.” This primeval fireball, suddenly appeared out of nothing (*yesh mei’ayin*) and marked the beginning of the universe, as before its appearance, nothing at all existed. Ramban referred to this primary substance as “*hule*” and it represented creation *ex nihilo*. Ramban explained that “*HaShem* brought into being, absolute nihility, an exceedingly fine primary essence with practically no substance. But this essence had the potential for bringing forth other things, ready to receive form and to emerge from the potential to the actual. After this ‘*hule*’ *HaShem* did not create anything out of nothing. Rather, He formed and made things, for He brought all things into being from this *hule*, endowed them with forms and perfected them.”

The connection between this intense concentrated form of potential energy and the formation of the universe is represented by Einstein’s formula, $E = mc^2$, to explain his Theory of Relativity. E denotes energy, m denotes matter, and c denotes the speed of light. Accordingly, energy can be converted to matter. Although this conversion required a vast amount of energy to produce a small amount of matter, the potential energy content in this primeval fireball was so huge that it would be the source of all matter that now exists in the entire universe. Subsequent explosion of this primordial speck of energy, *i.e.*, “*Bereishis*” or the so-called Big Bang, created plasma (particles having either positive or negative electric charges) mixed with the light of the fireball. Rapid cooling of the universe allowed the charged particles of the plasma to form atoms - *i.e.*, the basic constituents of matter [5]. Giant clouds of these primordial atoms subsequently coalesced through gravity to form stars and galaxies. Massive stars, called Red Giants, thousands of times larger than our Sun, eventually depleted their fuel and collapsed, to form massive nuclear fireballs, termed

supernova, which produced all the types of atomic elements, including oxygen and carbon. Rabbi Belsky explained that these destructions followed by creations ultimately lead to the creation of our universe and are examples of *boneh olamos umachrivon*. The end-product of these processes was the formation of our universe and, in particular, of planet Earth, earmarked for Torah and for *B’nei Yisrael* to perform *mitzvos* (*kiyum hamitzvos*) [15].

With regard to the Earth and under the rubric of *boneh olamos umachrivon*, Rabbi Belsky noted that this planet was remodeled and rebuilt several times [15]. Specifically, he noted the ice age, when vast sheets of ice covered large regions of the Earth, with their accompanying geological movements which ultimately made this planet more suitable for human habitation. For example, the slow advancement and retreat of the ice sheets and glaciers pulverized the rocky surfaces beneath them into a fine powder that formed the basis for soil of today. The ice age is interesting in itself, as supposedly we are now in the midst of an ice age, despite the rhetoric of global warming. Ice ages are times when the entire Earth experiences colder climate conditions. During an ice age, the polar regions are cold, there are large differences in temperature from the pole to the equator, and large, continental-size glaciers cover enormous areas of the Earth. Our climate today is actually a warm interval between these many periods of glaciations. During our present ice age, glaciers have advanced and retreated over 20 times [17]. It is the destructive movements of glaciers that affected the topology of the Earth and that enhanced the planet for human inhabitation. Examples of ice age benefits from the destructive movements of glaciers include: (a) nutrient rich silt brought to the plains by ice fields; (b) wind-blown dust delivered nutrients to the plains; (c) melting glaciers watered the plains; (d) formation of lakes and connecting rivers transformed barren deserts into productive land regions; (e) retreating ice sheets formed land bridges warm enough to facilitate human migration; (f) glacial retreat formed many safe harbors; and (g) retreating ice sheets, ice fields, and glaciers made possible enhanced abundance of plants and animals during warm interglacial episodes [18].

Another example of *boneh olamos umachrivon* presented by Rabbi Belsky is the origin of fossil fuels, including oil, natural gas, and coal. Apparently, specific regions of the Earth were covered with massive forests, which captured solar energy by photosynthesis. According to the impact theory, a large meteorite impacted upon the Earth, destroying most life forms. Over time, this dead biotic matter underwent anaerobic decomposition as it was compressed into deep subterranean layers. Subsequently, fossil fuels formed from the fossilized remains of these dead plants by their exposure to heat and pressure in the Earth’s crust [19]. Both soil formation during the ice age and fossil fuel formation are examples of *boneh olamos umachrivon* for the purpose of remodeling planet Earth.

From these examples, the following generalizations can be developed: (a) at times, destruction means a total oblivion (e.g., the Big Bang) and at other times it means the remodeling of a prior world (e.g., the ice age); (b) after a specific destruction/remodeling event, *HaShem* continued in the subsequent world from where He left off in the prior world (e.g., if a meteorite impact led to the extinction of 90% of the existing species, thereafter life continued through proliferation of the remaining 10%); and (c) every destruction/remodeling event ultimately was positive, in that, it gradually led to an enhancement, culminating in our present world. Rabbi Aryeh Kaplan [16], citing Rabbenu Bachya, noted that after each remodeling event, the world was in a greater state of perfection than in the preceding world. Each prior world was a preparation for the following world and each world was more highly perfected than the one before. Rabbi Belsky cited the first Rashi that the word *Bereishis* was understood by *Chazal* as “*Beis reishis*” - the world was created for two “firsts,” for the Torah and for *B’nei Yisrael*. The universe and the planet Earth were designed and redesigned to allow *B’nei Yisrael* to observe the Torah and fulfill the commandments (*kiyum hamitzvos*) [15].

The Malbim (Bereishis 1:4) wrote that the destruction of earlier creations and their replacement by more advanced successors was described as “good” by the Torah. Everywhere in the creation narrative, it concludes with, “And G-d saw that it was good.” This was meant to emphasize that although each successive stage of creation was “*yesh mijesh*,” i.e., it came about at the expense of the destruction of what had been before, yet “it was good.” All annihilation is negative for that which was annihilated, nevertheless, since its purpose was to affect a positive improvement, a higher stage in Creation, it was seen by G-d as good.

The remodeling concept apparently coincides with a *gemora* (Chagigah 16a) and a *midrash* (Bereishis Rabbah 1:5): If a human king built a palace on a site that previously served as a rubbish heap, anybody who mentions the prior use of the site of the palace insults the king. The same is true of this world (i.e., the concept of *boneh olamos umachrivon*). Whoever reveals the fact that this world was built on *tohu* and *bovu* insults its Creator. The Mishnah (Chagigah 11b) even goes so far as to state that whoever scrutinizes what existed in the past, prior to Creation, has no heed for the honor of his Creator and it would have been better for him that he had never come into the world.

If so, how can one delve into the prior worlds that were created and destroyed? It appears that Rabbi Belsky [15] was hesitant to discuss *Maaseh Bereishis*, noting that “our Sages therefore warn us that the human mind does not have the ability to fully grasp the depth of this area of knowledge.” He continued, “We have witnessed an unprecedented explosion of scientific research and discovery over the last two hundred years. Much of this

new research focuses on the universe and its formation, or more specifically on the development of our world... Anyone who is well versed in Torah can attest to the fact that every facet of our physical universe is discussed by our Sages. The explanations given by scientists for natural phenomena can help us understand the relevant passages in *Chazal* more deeply. In the interest of Torah, therefore, all empirical data relating to the origins of the world should be examined in light of the knowledge of *Maaseh Bereishis* that our Sages have revealed to us. This information, and sometimes even the theories based upon it, may be used to help provide a clearer understanding of the pertinent *maamarei Chazal*.” After these introductory remarks, Rabbi Belsky then proceeded to elucidate Rabbi Avahu’s *midrash* that *HaShem* created and destroyed worlds prior to our current world, designated for the Torah and for *Klal Yisrael* to use this world for *kiyum hamitzvos*.

The question of whether one can delve into *Maaseh Bereishis* was tackled differently by Rabbi Dovid Brown [12]. He also connected the Rabbi Avahu’s *midrash* (Bereishis Rabbah 3:7) to the concept of *boneh olamos umachrivon*, but expounded that today, it is necessary for the “honor of the Creator” to reveal this secret. To quote Rabbi Brown, “We live today at a time when the theory of evolution is accepted as obvious and indisputable. The basic evidence for the theory of evolution is the finding by geologists in the bowels of the earth of fossils of creatures that do not exist in life today. These fossils are disposed in various strata of rock, which themselves are jumbled, distorted, and broken. Fossils of certain types tend to be found in certain strata of rock and fossils of other types occur in other strata. This led those who desired to show that “There is no Divine judge; we may do what we wish,” to conclude that species were not directly created but evolved from other species over millions of years.” Rabbi Brown continued that “the creatures represented by the fossils existed in a world that refused the Torah, and their world was turned upside down from the *t’homos*” Similar upheavals occurred during the many remodeling events of planet Earth, explaining the occurrence of shellfish fossils even on the highest mountains, which were, at one time, under water.

Concerning Rabbi Avahu’s *midrash* that *HaShem* created many worlds and destroyed them, Rabbi Soloveitchik [13] posed the obvious question, “How could *HaShem* not get it right the first time? G-d ‘is omnipotent, omniscient. The *Ein Sof*, did He have to experiment...?’ Why did He have to create worlds and destroy worlds, create worlds that disintegrated into nihility until He created this world?” The Rav answered that the purpose was to present a moral challenge to *B’nei Yisrael*, to be creative and not to feel anything is impossible to accomplish. He presented some examples, such as education of Jewish children not affiliated with or not knowledgeable of Orthodox Judaism. Or, the seemingly impossibility of a Holocaust survivor to rebuild a family, of Rabbi Akiva to reestablish a vibrant

Torah community after the death of his students, or of a business man to restart a business after bankruptcy. To quote, “The message of creating and destroying worlds: strength: to start again - in life, business, and Torah.”

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