

A reader's response – The created Cosmos

To the Editor,
The Jewish Observer.

It was refreshing to read an Orthodox scientist make the rather obvious (but invariably overlooked) point that there is no need to seek reconciliation between Evolution and Torah. Dr. Chaim Presby writes (JO, May 2006): “it does not make sense to ask the often-heard question: Can't one believe in Evolution if one believes that it was *Hashem* who directed things in this matter?” As the article points out, the question would have made sense only if the theory of Evolution *would* have scientific evidence in its favor. However, the empirical evidence, with very few exceptions, tends to falsify the evolutionary story. There is no evidence that natural processes *do* account for the marvels of life or for any chemical origin-of-life prelude. It therefore follows that the whole question of reconciliation does not even arise in the first place.

Dr. Presby then writes that the cosmologists have finally approached the truth of the first two words of the Torah (*Beraishis bara*), since their discovery of the Big Bang supports creation *ex nihilo*. All that is left (other than the issue of timing) is for scientists to accept the inevitability of the “The Third Word” – *Elokim*. In Dr. Presby's words: “Is the world ready to see that the *Borei Olam* is behind the Big Bang?”

I would add to Dr. Presby's illuminating presentation that:

- The cosmologists' concession to an *ex nihilo* (*creation-from-nothing*) scenario has been only short-lived;
- The Big Bang conjecture is no more scientific than Evolution;
- The public has not been honestly informed of the weaknesses of the conjecture because of a hidden agenda;
- The Big Bang conjecture (like Evolution) promotes a false and dangerous worldview;
- The Big Bang conjecture actually was always fundamentally at odds with our *Mesorah* (even if we put aside the age-of-the-world issue).

A Short-Lived Concession

True, Big Bang cosmology initially raised questions that originally made cosmologists uncomfortable (because it implied a *yesh-mei-ayin* creation which implied a Creator). But the cosmologists soon overcame their discomfit by introducing extensions formed to remove the need for the Creator altogether. The famous astronomer Carl Sagan wrote in the introduction to Steven Hawking's acclaimed book, *A Brief History of Time*:

This is also a book about G-d ... or perhaps about the absence of G-d. ... [Hawking's Big Bang proposals makes possible] a universe with no edge in space or time, and nothing for a Creator to do.

Hawking argues that the universe has no beginning and there is nothing for the Creator to do because Big Bang cosmology can supposedly evolve a universe naturally without the help of G-d. It is now common to see papers in the scientific literature stating once again that the universe is eternal, with the Big Bang reduced to a local fluctuation in the material nexus:

We propose a cosmological model in which the universe undergoes an *endless* sequence of cosmic epochs that begin with a “bang” and end in a “crunch”.¹

Papers such as these are now the norm in the published scientific literature. Many cosmologists promote versions of Big Bang cosmology that no longer recognize creation *ex nihilo*. Rather, they envisage that what “banged” was some form of matter or energy that always, eternally, existed. They promote the idea that the fundamental constituents of matter created at the time of the Big Bang somehow coalesced into galaxies, the Sun and the Earth – and finally the marvels of life itself, by unguided, purely natural processes. Standard scientific thought has returned to professing an Aristotle-like naturalistic, eternal universe, with G-d a powerless bystander (if His existence is admitted at all). In other words, “Big Bang” cosmology is, at heart, really just another purely naturalistic theory for the origin of the universe.

Thus, these cosmologists once again deny the truth of the first two (and subsequent) words of the Torah. In the Torah account of creation as elucidated by *Chazal* and *Rishonim*, a mature world populated by galaxies, the Sun, the Earth and life itself appears not by unguided naturalistic processes but by supra-natural fiat of the Creator.

Big Bang cosmology no more scientific than Evolution

The fact is that Big Bang cosmology does not meet the normal criteria of scientific validity. No less than as with Evolution, there is no need to ask if G-d is behind Big Bang cosmology. If the theory would be scientifically correct the question would be valid. It is important to realize that Big Bang cosmology (like Evolution) is fundamentally different from the *operational sciences* that get us to the moon, map the human genome or result in technological breakthroughs such as the Presby Lens for fiber optic systems.

The operational sciences are directly based on empirical testing. “The *sine qua non* of physical science is empirical testing of hypotheses. Without this acid test we would have no way of distinguishing scientific gold from fool’s gold, and we might come to view ourselves as being quite rich when, in fact, our pockets were mostly full of pretty, but non-negotiable, iron pyrite ... an undesirable blurring of the distinction between physical science and mathematical abstraction has taken place in the fields of particle physics and cosmology over the past three decades”.²

By contrast, *origin sciences* such as Evolution and Big Bang Cosmology necessarily

¹ Paul J. Steinhardt (Princeton), Neil Turok (Cambridge), “A Cyclic Model of the Universe”, *Science*, 24 May 2002: Vol. 296, no. 5572, pp. 1436 – 1439, DOI: 10.1126/science.1070462. Emphasis added.

² Robert L. Oldershaw, *Am. J. Phys.* 56, 1075, 1988.

rest more on unproven foundational assumptions than empirical testing. They use vast backwards extrapolations (attempting to reconstruct how things came to be, based upon how they behave now), relying on the assumption of an *open-ended* unobserved past. Their proponents have been forced to posit hypothetical entities that fail to be detected in empirical tests, and that are actually contradicted by stubborn anomalies in the data. As such, these origin theories do not have the credibility of the operational sciences.

This is a vast subject, but hopefully a few examples will suffice to illustrate the point. Nobel Laureate Steven Weinberg writes:

Nevertheless, there *is* one great *uncertainty* that *hangs like a dark cloud* over the standard [Big Bang] model. Underlying all the calculations described in this chapter is the Cosmological Principle, the assumption that the universe is homogenous and isotropic. (By homogenous we mean that the universe looks the same to any observer who is carried along by the general expansion of the universe, wherever that observer may be located; by “isotropic” we mean that the universe looks the same in all directions to such an observer.) ... However, *we have no evidence* that the Cosmological Principle was valid at earlier times.³

The truth is that there is much more than just one uncertainty that “hangs like a dark cloud” over Big Bang cosmology. A letter to the *New Scientist* (May 22nd, 2004), signed by 33 researchers (many of them experts in cosmology) states:

The big bang today relies on a growing number of hypothetical entities, things that we have never observed – inflation, dark matter and dark energy are the most prominent examples. Without them, there would be a fatal contradiction between the observations made by astronomers and the predictions of the big bang theory. In no other field of physics would this continual recourse to new hypothetical objects be accepted as a way of bridging the gap between theory and observation. It would, at the least, raise serious questions about the validity of the underlying theory.⁴

“We’ve hit some really profound problems with cosmology with dark matter and dark energy. That tells us we have to rethink fundamental physics and try something new” (Cosmologist Andreas Albrecht, University of California, Davis, August 26, 2006).⁵

³ Steven Weinberg, *The First Three Minutes : A Modern View of the Origin of the Universe*, Basic Books, New York, 1993. page 119-120. Emphasis added. Note that Weinberg, born in 1933 in the Bronx, lost much of his mother's family in Germany during the Holocaust. He himself is an atheist as are most of the other scientists quoted in the sequel. It is self-understood that we use their quotes to indicate that they themselves acknowledge the weaknesses of the origin sciences, not that they agree to the points made in this article.

⁴ Some of the scientists writing the letter include Hermann Bondi, (Cambridge), Thomas Gold (Cornell) and Halton Arp (Max-Planck-Institute Fur Astrophysik).

⁵ Big bang cosmology predicts that the universe is at the critical density and flat. But observations anomalously show only about 4% of the required matter thus contradicting the prediction – 96% of the matter is missing! Another anomaly (known since 1971) is that the galaxies are rotating faster than predicted by Newtonian Physics and General Relativity. It is conjectured that 25% of invisible “dark matter” makes up some of the deficit and solves the rotation problems (however, there are alternative theories as well). The rest of the missing matter (70%) is postulated to be the mysterious “dark energy” that acts like no other force that has ever been observed. Recently Douglas Clowe’s team at University of Arizona claimed (on August 21, 2006) that they found dark matter in the Bullet Cluster. They even had a picture of it. The NASA Chandra X-Ray Center called it a “direct proof” of dark matter and the story received wide publicity in the media. Four days later *New Scientist* reported a new proposal to bring back ether theory in modified form; the title of the article was, “*Ether returns in bid to oust dark matter*” (Zeeya, Merali, pages 8-9, August 26, 2006). The Albrecht quote appears in this paper. Soon thereafter *New Scientist* reported rebuttals to the NASA announcement: “*Dark matter ‘proof’ called into doubt*” (Stuart Clark, 09 September 2006). The dark matter “proof”, it appears, was circumstantial and open to other interpretations. Hypothetical dark matter particles (such as WIMPs or axions) have never been observed here on Earth, despite over 20 years of empirical testing.

The actual evidence, with very few exceptions, tends to falsify these theories of origins. As more and more observational evidence has accumulated contrary to Big Bang cosmology, cosmologists have been forced to invent an increasing number of unobservable hypothetical entities (e.g. the inflaton, dark matter and energy) to save the theory from falsification. The successes claimed by the theory's supporters consist of its ability to retrospectively fit observations with a steadily increasing array of adjustable parameters, just as the old Earth-centered cosmology of Ptolemy invented layer upon layer of *ad hoc* epicycles. These presuppositions are planted to protect these theories from the failure that would result would the theories be examined without the bias of these presuppositions. Observations of the measured redshifts (the original evidence that caused physicists to invent the Big Bang model in the first place) is now so contrary to the theory, so difficult to understand and so unexpected, that discussion of them has been completely left out of the latest cosmology textbooks.⁶

But despite the valiant attempts of cosmologists to save the theory from disconfirmation with these increasingly desperate strategies, there are still huge, puzzling anomalies. The theory has been unable to account for the formation of galaxies, or of the Sun and the Earth. It can hardly count at all as an explanation for the large-scale structure of the universe.

Defenders of these attempts will say that science, by definition, seeks to know how things could have become as they did, without recourse to the "simplistic" answer of "that's how G-d made it." This approach, with some tweaking, may be defended even according to Torah *hashkafa*, but only for developments post-Creation and with a full recognition that it is the Creator who makes the legitimate operational sciences possible. Science as the handmaiden of Torah is to be openly welcomed!

However, the illegitimate attempt to use unproven naturalistic processes cannot be used to supplant what our *Mesorah* makes clear about Creation: that *Hashem* created a mature world *yesh-mei-ayin* (*ex nihilo*) directly from absolute nothingness. Because, even if there were no problems with the scientific validity of the naturalistic approach, the foundation of these theories make them irrelevant as a challenge to our *Mesorah*. It is flawed logic to question or modify our *Mesorah* based upon the assumption that the world originated from the way nature is observed to behave today. In the words of the *Moreh Nevuchim*:

ואין ללמוד בכל האופנים מטבע הדבר אחר היותו וגמרו ומציאותו בתנוחתו כפי שלמות מצבו, על מצב אותו הדבר בעת תנועתו להויה, ואין ללמוד ממצבו בעת תנועתו על מצבו לפני שהחל בתנועה. וכל זמן שתטעה בענין זה ותביא ראיה מטבע הדבר המצוי בפעל על טבעו, כשהוא בכח יתעוררו לך ספקות גדולים, ויהיו בטלים לדעתך דברים שהיותם חיובות,

⁶ For example, mathematician David Berlinski in "Was There a Big Bang?", *Commentary*, February, p28-38, 1998 writes: The [late] American mathematician I.E. Segal and his associates have studied the evidence for galactic recessional velocity over the course of twenty years, with results that are sharply at odds with predictions of Big Bang cosmology. Segal is a distinguished, indeed a great mathematician, one of the creators of modern function theory and a member of the National Academy of Sciences. He has incurred the indignation of the astrophysical community by suggesting broadly that their standards of statistical rigor would shame a sociologist. Big Bang cosmology, he writes "owes its acceptance as a physical principle primarily to the uncritical and premature representation of [the redshift-distance relationship] as an empirical fact.... Observed discrepancies ... have been resolved by a pyramid of exculpatory assumptions, which are inherently incapable of noncircular substantiation." See also F. Hoyle, G. Burbidge and J.V. Narlikar, *A Different Approach to Cosmology*, Cambridge University Press, 2000, Chapter 23 and in particular p325.

ויתחייבו לדעתך דברים בטלים.

No inference can be drawn in any respect from the nature of a thing after it has been generated, has attained its final state, and has achieved stability in its most perfect state, to the state of that thing while it is moved towards being generated. ... Whenever you err in this and draw an inference from the nature of a thing that has achieved actuality to its nature when it was only in potential, grave doubts are aroused in you (Rambam, *Moreh Nevuchim*, II: 17).

One of the untested foundational assumptions of naturalism is the *open-ended* uniformity, consistency and stability of nature. For example, empirical measurements and the theory of relativity guarantee that the speed of light is an absolute constant in the current era and that the four forces (gravity, electromagnetism, and the weak and strong nuclear forces) apply uniformly and continuously. Does that guarantee that it always was so, back to an open-ended unobservable past? Such unproven presuppositions made sense in a static and eternal Aristotelian world in which the First Cause was nothing more than an automatically operating force that *willy-nilly* produced the natural laws by necessity, thereby keeping the spheres in motion. The Aristotelian first cause cannot and could not play an active role in the world.

However, once we allow that the laws are not necessary, but were brought – supernaturally and miraculously – from a state of non-being into being solely by the transcendental wisdom and will of the Creator, then the stability and uniformity of nature begin *only after* the Creation Week. And it is G-d alone, not necessity, that guarantees their limits, and the stability and consistency that make the operational sciences possible. Without the untested presupposition of the uniformity of nature, no inference can be drawn from known conditions today to the unknowable and unobservable past.

At the heart of the origin theories is the unproven presupposition that man is the result of unguided naturalistic processes that did not have him in mind. If, as they assume, nature is all there is, then *by definition* (rather than by *demonstration*) nature must somehow have the ability to do its own creating (whatever observations actually show). This assumption forces the theorists to insist that even if one naturalistic theory is disconfirmed, there must surely be another that could take its place.

A cover-up – The weaknesses of origins sciences

Only infrequently is the arbitrary nature and philosophical bias of these naturalistic presuppositions acknowledged. Richard Lewontin (Alexander Agassiz Professor of Zoology at Harvard) is refreshing in his forthrightness:

Our willingness to accept scientific claims that are *against common sense* is the key to an understanding of the real struggle between science and the supernatural. We take the side of *science* in spite of the *patent absurdity of some of its constructs*, in spite of its failure to fulfill many of its extravagant promises of health and life, in spite of the tolerance of the scientific community for unsubstantiated *just-so stories*, because we have a prior commitment, a commitment to materialism.⁷

Why must the evolutionary naturalist adopt a zero concession policy to the supra-

⁷ Richard Lewontin, "Billions and Billions of Demons", *New York Review of Books*, Vol. 44, 1997. Emphasis added.

natural – something that transcends nature? Why accept “absurd” constructs and unsubstantiated “just so” stories for the origin of and development of life rather than supra-natural creation by a transcendent Creator? Lewontin expresses his fear of the supra-natural as follows:

It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door. The eminent Kant scholar Lewis Beck used to say that anyone who could believe in G-d could believe in anything. *To appeal to an omnipotent deity is to allow that at any moment the regularities of nature may be ruptured, that miracles may happen.*⁸

The naturalist cannot allow a Divine Foot, so to speak, in the door. To the mind of the naturalist, a belief in a transcendent Creator able at any time to create, control or override the forces of Nature is anathema. Yet this prejudice is the sole basis for defending a version of history at odds with what our *Mesorah* teaches. Why should *ma'aminim b'nei ma'aminim* subscribe to it?

Generally, however, the scientific mandarins (largely atheistic⁹) who dominate the elite halls of academia and the media have not been keen to reveal to the public the extent of the significant problems faced by their theories of origins. More importantly, they have not revealed the extent to which these theories rely on unproven metaphysical presuppositions rather than the empirical evidence. The public is not kept informed of the large number of unproven assumptions, shoddy logic and semantic manipulation taking place behind the scenes. As Dr. Presby illustrated through his own experiences, in polite scientific company one may never mention an intelligent cause for the origin of functionally complex systems, even if there have been long-standing systematic failures in the naturalistic explanations.

A False and Dangerous Worldview

Dr. Presby criticized creationists for bringing some unwelcome baggage along with their theories. However, I believe that far more unwelcome baggage accompanies the thinking behind the mindless and godless Big Bang cosmologies promoted by opinion leaders such as Sagan, Hawking, and Weinberg. The academic elite at the National Academy of Sciences and the managers of the national media have a personal stake in safeguarding the religion of Darwin. That is why those who try to challenge the unproven presuppositions of naturalism are stereotyped as stupid fundamentalists. That is why the terms in which the media and the textbooks report any controversy are posed in such a way as to prevent “dangerous” ideas of G-d from getting serious consideration.¹⁰

⁸ *Ibid.* Emphasis added.

⁹ E.J. Larson and L. Witham. Leading Scientists Still Reject God. *Nature*, v394(6691), p. 313, 1998.

¹⁰ Consider the attempt of the scientific establishment to humiliate Richard Sternberg at the Smithsonian for publishing an article on intelligent design. There is now a campaign underway to do the same to the astronomer Guillermo Gonzalez at Ohio State University for his intelligent design work in cosmology. Note that Gonzalez

Evolution and Big Bang cosmology function as quasi-religious naturalistic myths of modern culture that are assumed to be true *a priori* rather than as scientific hypothesis that are to be submitted to rigorous empirical testing. These myths are used to support a worldview that man is the result of unguided processes that did not have him in mind, with all the painful consequences for society so entailed (moral Darwinism). Consider the consequences of such a worldview as delineated by pro-Darwinians Michael Ruse at Florida State University and Edward O. Wilson at Harvard:

The time has come to take seriously the fact that we humans are modified monkeys, not the favored Creation of a Benevolent G-d on the Sixth Day. In particular, we must recognize our biological past in trying to understand our interactions with others. We must think again especially about our so-called "ethical principles." The question is not whether biology – specifically, our evolution – is connected with ethics, but how. ... Ethics is illusory inasmuch as it persuades us that it has an objective reference. This is the crux of the biological position. Once it is grasped, everything falls into place.¹¹

As evolutionists, we see that no justification [for ethical behavior] of the traditional kind is possible. Morality, or more strictly our belief in morality, is merely an adaptation put in place to further our reproductive ends. Hence the basis of ethics does not lie in G-d's will.... In an important sense, ethics as we understand it is an illusion fobbed off on us by our genes to get us to cooperate. It is without external grounding. Like Macbeth's dagger, it serves a powerful purpose without existing in substance.¹²

Big Bang cosmology differs – fundamentally – with our *Mesorah*

As mentioned earlier, Big Bang proponents fail not only to recognize the first two words of the Torah's report of the very first instant of the Creation Week; they fail as well to recognize the third, the fourth, and all subsequent words of the Genesis account. Modern cosmologists feel that they have removed the need for G-d altogether and that nature can somehow do its own creating.

However, the first chapter of *Beraishis* describes a mature world populated by galaxies, the Sun, the Earth and life itself appearing – not by unguided naturalistic processes, but – by supra-natural fiat of the Creator.

The Torah point of view is diametrically opposed to all these naturalistic creation myths. Methodological naturalism has turned nature into an idol that produces undirected results through brute forces. The Torah teaches that nature itself is the creation of the all-wise Creator; that it did not always behave as it does now. Any attempt to read the first chapter of Genesis as a natural process (even with G-d in the background) fundamentally distorts our *Mesorah*. Creation was totally miraculous – not conducted through natural processes at all – from its very beginning on day one to its very end on day six with the creation of man. The Maharal explicates this concept which permeates *Chazal* and all the *Rishonim*:

accepts big bang cosmology but the mere idea that even that is intelligently designed is too much for the establishment.

¹¹ Ruse, Michael. 1995. "Evolutionary Ethics: A Defense." in *Biology, Ethics, and the Origins of Life*. ed. Holmes Rolston, III. p 89-112. Boston: Jones & Bartlett Publishers (see pages 93 and 101).

¹² Michael Ruse and E. O. Wilson, "The Evolution of Ethics," in *Religion and the Natural Sciences: The Range of Engagement*, ed. J. E. Hutchingson (Orlando, FL: Harcourt and Brace, 1991).

[מהר"ל באר הגולה באר הרביעי דף פ"ג] דע כי הוא יתברך הוציא את הנמצאים כולם לפעל המציאות בששת ימי בראשית בעצמו ובכבודו, לא ע"י שליח הוא הטבע, כמו שהיה אחר ששת ימי בראשית שהש"י מנהיג את עולמו ע"י השליח והוא הטבע.

Know that He, may His name be blessed, caused all of reality to materialize into existence during the six days of creation Himself, in His own Glory (*b'chvodo u'veatzmo*) and not through an agent, meaning nature, as opposed to the period which ensues after the six days of creation in which *Hashem*, may His name be blessed, guides his creation via an agent, referred to as nature. (Be'er haGola - pg 83, second column last paragraph).

During the Creation Week of *Maaseh Bereishis*, nature was in the process of being created – it was not able to do any creating by itself. G-d did not use the agency of nature to produce the world. It is not just the first moment that arose via supra-natural fiat. A complete mature universe (galaxies, plant life, fish, birds and animals) arose solely and only due to the supra-natural Word of G-d. The whole meaning of *Shabbos* is that the six days of creation are supra-natural; that, only at the end of the sixth day did G-d's supra-natural creative activity cease. As it says in the Torah and as *Chazal* decree we say every *Shabbos* – “for in six days G-d made heavens and earth”. It is only at the end of the Creation week that the normative rules of nature become operational. We rest on *Shabbos*, the seventh day, to commemorate these facts.

During the Creation Week, G-d was a בורא (a Creator). At the end of that week, a mature creation had been brought into being – G-d ceased from creating new forces and entities and became a מנהיג (the Sustainer and Guide of Creation). Rabbi Shlomo Miller *Shlit"a*, a renowned Posek and Rosh Kollel in Toronto, writes thus:

ובנוגע למה שכתבנו לענין ששת ימי בראשית, הנה ידוע שהקב"ה בורא ומנהיג עולמו, והנה זמן בריאת העולם נמשך כל ששת ימי בראשית וכמאמרם ז"ל בעשרה מאמרות נברא העולם. והנה אלו שרוצים להתאים טעאריות של אלו שנקראים חכמי הטבע לאמונתן בששת ימי בראשית לא ימלטו מלכשל בעקרי תורתנו הקדושה שהרי אמונתנו בששת ימי בראשית הוא מעקרי האמונה וכל ענין שביתתנו בשבת הוא להעיד שהקב"ה ברא עולמו בו ימים וביום השביעי שבת ואמר לעולמו די ואז נחקקו חקי הטבע כמו שאנו רואים היום. אולם יסוד נודע בחכמת הטבע שאם מצד הטבע גרידא יצא דבר כזה א"כ אפשר לאותו דבר לחזור ולהשנות עוד הפעם וא"כ אלו המחזיקים Big Bang Theory וכדומה, על כרחך שיטתם היא שמצד הטבע יוכל להשנות עוד הפעם שהרי מצד חקי הטבע שנוהגים עתה נעשה הדבר מתחילה ואם קרה פעם אחת בהכרח שיש אפשרות להקרות עוד הפעם. אולם מיסודי אמונתנו הוא שרק ע"י עשרה מאמרות נבראו שמים וארץ, וא"כ מצד חקי הטבע בלי שתוף רצון הקב"ה לשנות ולבראות עולמו כבראשונה נמנע הוא מן המציאות שיברא עוד הפעם.

Regarding what we wrote with respect to the six days of creation, it is well known that *Hashem* both created and continues to guide the world. The period of creation extended throughout the duration of the *sheshes yimei bereishis* as our sages state, *b'assara ma'amaros nivra ha'olam*.

Those who seek to apply naturalistic scientific theories to the six days of creation will be unable to save themselves from stumbling in the fundamentals of the Holy Torah. Creation is a fundamental of Torah. Our resting on the *Shabbos* is mandated specifically to testify that *Hashem* [supra-naturally] created a [mature] world in six days and rested on the seventh which is when “He told his world stop!” – at which point the laws of nature became concretized as we see them today.

There is a well known principle of nature that if something was affected by a process once, this process can [repeatedly] affect it again. Those who align themselves with theories such as Big Bang cosmology [for the origin of the universe] and the like, must therefore also be committed to the position that under the same natural conditions it must be possible for this process to occur again. Since Big Bang Theory is understood strictly within the laws of nature which prevail today, if it happened once, we must say that it could happen again.

However, the foundation of our faith is that only via the *asarah ma'amaros shebahen nivre'u shamayim va'aretz* was the world created. Therefore the [creation or] recreation of the world is impossible if we have only the laws of nature without the active will of *Hashem* to create it.¹³

There were those who, like Aristotle, made a G-d out of nature and a religion out of science. The *Rambam* responded to them by stating that his purpose is to explain “by means of arguments that come close to being a demonstration” that the world exists neither through chance, nor through inexorable necessity, but as the result of the purposive activity of an intelligent Creator (*Moreh Nevuchim* II, 19).

In the *Rambam's* time, the philosophers had their interpretations of what they observed. Today's naturalists have their interpretations of what they observe (or claim to observe). In either case, the *Rambam's* principle remains: It is futile and misleading to reconstruct how the world and its inhabitants came into being in the past, based upon the character of these things in the present. For G-d Himself informs us that the world and nature were not always as they are now. This notion of *chidush ha-olam* is our core belief fundamental to the *mitzvah* of *Shabbos*.

While evolutionists and creationists often debate the scientific evidence for evolution, the source of the ongoing dispute is much deeper. It is not just a clash about gaps in the fossil record or dinosaur bones. Rather, it is a profound dispute about fundamentally different worldviews. A free-running translation of the words of *Rabbenu Asher* of blessed memory best summarizes our conclusions (*Teshuvos HaRosh* 55:9):

ועל זה אמר החכם: כל באיה לא ישובון, רוצה לומר: כל הבא ונכנס מתחלה בחכמה זו, לא יוכל לצאת ממנה להכנס בלבו חכמת התורה, כי לא יוכל לשוב מחכמה טבעית שהורגל בה, כי לבו תמיד נמשך אחריה. ומחמת זה לא ישיג לעמוד על חכמת התורה, שהיא ארחות חיים, כי יהיה לבו תמיד על חכמת הטבע, ותעלה ברוחו להשוות שתי החכמות יחד, ולהביא ראיה מזו לזו, ומתוך זה יעות המשפט; כי שני הפכים הם, צרות זו לזו, ולא ישכנו במקום אחד.

King Solomon wrote: “all who come to her do not return” (*Mishlei* 2:19). This means that anyone who starts his studies with this naturalistic wisdom rather than Torah will not be able to escape from it. Torah will not enter his heart; for, he will not be able to remove himself from this naturalistic method of wisdom to which he has become accustomed. For his heart has been seduced after it. Because of this he will not be able to apprehend the wisdom of Torah – which is the way of life. His heart will continually dwell on naturalistic wisdom which will cause him to equate such thinking to Torah and to reason incorrectly from one domain to the other. This will lead him to distort Torah judgments. Naturalistic philosophies and Torah are two opposites that are incapable of peaceful coexistence – they cannot dwell in the same place.

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¹³ Motzai Pesach, 5766.