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## THE BIBLICAL STORIES OF CREATION, GARDEN OF EDEN AND THE FLOOD: HISTORY OR METAPHOR?

The Rabbis long ago endorsed the idea that the written Torah contains more than one level of meaning.<sup>1</sup> This is not surprising given, on the one hand, the rich complexity and multidimensional character of human language and, on the other, the analytic power of the human mind. However, in regard to the Torah, the problem of multiple meanings is different than in the case of a poem or novel. In regard to the latter, the reader is expected and even encouraged to exercise his own powers of analysis and imagination in finding all sorts of meanings, even if he may actually be reading some of them “into” the text. Indeed, it has even been suggested that seeking the meaning of works of art, such as painting and literature, by focusing on what the artist had in mind is to commit the “intentional fallacy.”<sup>2</sup>

However, the Torah, as its very name indicates, is a document to which the religious reader turns for guidance and instruction. The reader, therefore, wishes first and foremost to learn what it is that the Torah is saying rather than some individual’s reaction to the text, even though, in some sense, the text may have inspired the reaction. Given the possibility of multiple meanings in the Torah, the real problem for the religious reader is deciding when a text is to be read as having literal meaning *only*, metaphorical meaning *only*, or perhaps as having meaning on both levels, with *both* having been intended by the Author.

I wish to suggest the following method: before one either rejects a literal meaning entirely or decides it is incomplete in the sense that it must be complemented by meaning on another level, one must supply reasons or justifications for doing so. For it must be presumed that if “the Torah speaks in the language of men,” it, in the first instance, employs that language in its most direct and effective form for conveying information and providing practical instruction, i.e., it utilizes words and sentences for their descriptive content which we call the literal meaning.<sup>3</sup>

## TRADITION

Those parts of the Torah, for example, for which understanding the literal meaning of the text seems perfectly adequate are those which embody the laws and commandments, statutes such as “Thou shall not commit adultery” (*Exodus* 20:13) or “Seven days no leaven shall be found in your houses” (*Exodus* 12:19). While there may be differences of opinion in explicating the full extent of some of these laws and in arriving at a precise definition of “adultery” and “leaven,” it is still only the *literal* meaning of the text that is in question. Should someone, for example, propose that in place of the literal meaning or in addition to it, *Exodus* 12:19 is to be read in some symbolic way in which “leaven” stands for the “evil urge” in man, we should respond by saying that it is his privilege to so interpret the text. However, since he can provide no plausible reason to believe that it is the intent of the Torah to have the reader, in this particular case, go beyond the literal meaning, we shall classify his interpretation merely as personal *midrash*.

An example of a text where the literal meaning is not acceptable is the following report of conditions in the land of Canaan: “the cities are great and fortified *up to the heavens*” (*Deuteronomy* 1:28) The reader’s sense of realism precludes the belief that the scouts meant to say that the fortifications actually touched the heavens! We assume that words are being used here in a symbolic or metaphorical fashion. The native speaker is quite aware of the natural tendency of language to develop such usages in everyday speech. Another example of this is *Deuteronomy* 10:16: “Circumcise therefore the foreskin of your heart . . .” Although taking the form of a command, this prescription, unlike *Genesis* 17:11, “And ye shall be circumcised in the flesh of your foreskin,” is clearly not to be taken literally, but rather interpreted as a metaphor.

### THE STORY OF THE GARDEN OF EDEN

A text which helps to point out the reasons for the occasional insufficiency of the literal meaning is the classic story of Adam and Eve in the Garden of Eden (*Genesis* 3). The story naively read is fascinating, with a didactic plot and a cast of characters that includes a tragic hero, a beguiled woman, a villainous talking serpent, and trees with wondrous powers. But what impels the reader to seek here another level of meaning? What makes him think that here the Torah intended something additional?<sup>4</sup> Once again, the point of departure is the presupposition that the Torah is a book of instruction. Therefore, any text which, if taken literally, does not instruct but mystifies and obfuscates, signifies

that one should look beyond the literal. A “tree” whose fruit bestows “knowledge of good and evil” or eternal life cannot be a “real” tree in the sense in which we know it. A “garden” in which the snake has an agenda and speaks persuasively cannot be our kind of garden. Also, it is not immediately apparent what is the nature of the “knowledge of good and evil” that man acquires after eating of the forbidden fruit.<sup>5</sup> It is certainly not the ability to distinguish between good and evil, because in commanding Adam the Torah assumes that man will realize that obedience to God is good and disobedience evil. A clue seems to be given in the words, “And the eyes of both were opened and they knew that they were naked.” But what does this tell us about the nature of the change that man underwent?<sup>6</sup> In short, the failure of the language to instruct, if taken literally, leads us to think of the possibility of metaphor. The characters and events are to be interpreted in a symbolic way. This story seems to be dealing with the origin and nature of evil in man and seeks to explain how it is that man and woman, the special creations of a moral and benevolent God, soon find themselves in a hostile environment with vital needs unprovided for. In a pre-philosophical age, the solution to such an extremely difficult theological problem could only be suggested and alluded to by means of this literary device called metaphor.<sup>7</sup>

Note here an important difference between the *story* of the Garden of Eden and the *sentence* in *Deuteronomy* 1:28. In the case of the latter, should a reader believe the text to be saying that the fortifications of the cities of Canaan did indeed touch the heavens, he is simply wrong. However, in the text of the Garden an entire *story* in the form of a metaphor is involved. This means that the story and what it stands for resemble each other in certain ways. Thus, even if a reader believes that these were real trees or, believing them to be symbols, does not know *what* they symbolize, he may still be said to have learned something positive. He now understands that some kind of disobedience on the part of early man brought him to his present predicament. Regarding this type of metaphor, therefore, the literal meaning, although not complete, is not misleading and the full intended meaning may be partially deciphered and grasped in degrees.

## THE STORY OF CREATION

Let us now consider the Creation story as it appears in the opening 31 verses of *Genesis*. Here we are informed not only that God brought the world into existence, apparently out of nothing, but also *how* He did it: the time it took, the different stages, the particular sequence. From a

theological point of view, it is quite clear that the doctrine of Creation *ex nihilo*, i.e., that God is the Maker of heaven and earth and all that is in it; that God is the Ground of all being; that He is the only necessary existant while all else is dependent upon Him, is central to Judaism and was what distinguished it from the paganistic beliefs that had preceded it.<sup>8</sup> However, this crucial doctrine is already clearly proclaimed in the very first verse. Why did the Torah continue to go into detail as to *how* the world was created?<sup>9</sup> Of what relevance to man is this account of natural history? After all, the process by which this universe came into being, whatever it may have been, was a *singularity*, a never-to-be repeated event which, as such, is outside the scope of science. Thus, while the “whys and wherefores” of the Big Bang itself is a legitimate part of *religious* explanation, everything *after that* has already been pre-empted by the fast-developing branch of science known as cosmology or cosmogony.<sup>10</sup> Should we therefore conclude from the plethora of detail in *Genesis* 1:2 to *Genesis* 1:31 that the Torah wishes to teach us science and thereby run the risk that its account may someday be in competition with that of a later science?<sup>11</sup>

Let us examine more closely the language of the story of Creation: We have before us a very straightforward description in which language seems to be intended to be taken literally. We are told how God puts into execution what seems to be an orderly plan to bring the visible universe into existence. In the course of sequential stages over time, a proper environment for life-forms is fashioned in which life develops from the simple to the complex, culminating in man. The words used to describe what is created are all readily understood, concrete terms referring to phenomena well-known from human experience: water, light, earth, dry land, sun, moon, stars, grass, herbs, trees, fruit, birds, reptiles, morning, evening, etc. The verbs used to describe how God produces these things are also familiar, but in this particular context not very illuminating: “God *created* . . .”, “And God *made* . . .” and “God *said*, let there be . . . and there *was* . . .” In terms of *human* creativity we are interested not only in the objects created but *how* it was done, the techniques used. In this case of *Genesis* 1:1-31, we do not, for all of its detail, really learn anything about the actual mechanics of how God produces our world except that He is the final and efficient cause and is alone responsible for all. If this is so, we remain with our original question: Would it not have been sufficient for the Torah to have limited its account to the first sentence, which clearly teaches that it is God and God alone who brought the universe into existence? Why was it necessary for us to be told about the *how* of creation?

Let us consider the problem in more general terms. For reasons we shall shortly discuss, the Torah indeed wished man to know something about the methods used by God in creating the universe. Assuming that the Author knew precisely how the entire cosmos—the meta-galaxies, the galaxies, the Milky Way, the solar system, the planet Earth and all the different life-forms—all emerged out of the Big Bang and was able to describe it in correct mathematical and scientific terms, in what language was He to express this to people in a pre-scientific age? Obviously, He could not tell it all nor use terms that were not intelligible to them. On the other hand, what was written had to be of such a nature that later generations, coming after the advent of science, would not think themselves misled as they read the biblical account.

The Torah intended the story of Creation to be taken literally but with one reservation: that it be understood that the terms had “stretchability,” i.e., that while all of the nouns would retain their common-sense meanings, in the event that future scientific discovery should broaden our knowledge of such phenomena as light, time, water, sun, stars, heavens, firmament (*rakia*), we should be prepared to “stretch” their primary meanings to cover and include these new phenomena, with the overall account remaining essentially “true.”

What gives us the right to believe that this is the intention of the Torah? The same test of “reality” or “coherence” used earlier to alert us to the metaphorical nature of “fortifications that reach the heavens” or “trees whose fruit bestows the knowledge of good and evil,” applies here as well. If on the first day of Creation before there was any sun or moon we are told, “And there was light,” and we are puzzled as to the source of this light this constitutes a signal to leave room for a meaning that may come in the future. What are considered textual anomalies to one generation are hints that, in time, may become the entrance to another level of meaning. Indeed, recent works by Torah-knowledgeable scientists point out that the “light” mentioned in *Genesis* 1:2 may be referring to the radiation which suffused the early universe and whose detection in 1964 was hailed as evidence of the occurrence of the Big Bang. They seek to demonstrate that the Torah account in its simple, concrete common-sense terminology is quite close to the latest findings of cosmology.<sup>12</sup> But, however true, why does the Torah want us to know *how* God created the world? What does it teach us?

The answer may be related to Moshe’s urgent plea to the Lord, to which he received a positive, albeit partial, reply: “Now, therefore, I pray thee, if I have found grace in Thy sight, make known to me Thy ways” (*Exodus* 33:13). This implies 1) that to an extent man *can* learn

something about the “ways of God,” the methods employed by Divine Providence in nature and history, and 2) that such knowledge is useful to man.<sup>13</sup>

The action used most frequently by God in bringing the world into existence is speech: “And the Lord said ‘Let there be light’, and there was light” (*Genesis* 1:3), “He spoke and it was . . .” (*Psalms* 33:9). Later in the process God’s speech is directed to that which has already been created. “And the Lord said, let the *waters* swarm with living creatures . . . let the *earth* bring forth” (*Genesis* 1:20,24). Unlike the initial creation “out of nothing,” this can be understood as the consequence of the fact that God had encoded already existing elements with the ability to unfold or *evolve* into higher, more complex levels of life. Yet at other times in the creation process, God is described as acting directly. For example, in the case of the sun and the moon we are told: “And God *made* the two great lights and *set them* in the firmament of the heavens” (*Genesis* 1:16,17). Taken together, the unfolding and the direct action seem to suggest a method which might be called *guided punctuated evolution*.

To call a process evolutionary is to imply that it contains the following elements:

- 1) Conservative: Older features that have proven useful are retained.
- 2) Innovative: There are possibilities of new elements appearing.
- 3) Selective: In the course of this process certain possibilities are never realized, others come into existence but disappear, while still others endure.<sup>14</sup>

In the beginning, God, in His infinite wisdom and power, creates a single, infinitesimal bit of energy. This energy is encoded so that by a process of self-development it responds to rapidly changing conditions of space and temperature which are themselves self-developing, evolving in the direction of the variegated and complex universe we experience today. However, it is not the case that man as he contemplates himself and his condition can conclude that the universe is the predictable result of the unfolding of certain general principles implanted in nature at the beginning of creation. The Torah tells us that the process was not all automatic or inevitable. At various crucial points in the development of all aspects of the cosmos, galactic clusters, our solar system and life on planet Earth, God’s guidance or intervention was necessary in order to arrive at the desired goal. Seen from the scientists’ vantage point, of course, these “interventions” are perceived as “dumb luck” or as fortunate “accidents.”<sup>15</sup>

Originally the theory of evolution was applied in the area of biology to answer the question of the origin of species because Darwin believed he had discovered the mechanism by which these changes could be explained. However, the fossil record, uncovered since Darwin, does not support the theory. It shows that for millions of years certain species persist without change and suddenly disappear. Then new species appear, most of them fully formed, and disappear unchanged. Why certain species vanish and others come into being cannot be explained by any principle in nature. And when we do find a cause, such as drastic climate change or the impact of a meteor, the result, while fortunate from a human point of view, seems to be a matter of "sheer accident."

The knowledge that *guided punctuated evolution* is one of the "ways of God" is of particular help in the sensitive area of the creation of man. By use of mutational and environmental changes, God unobtrusively guides the evolutionary process in the direction of the physical development of *homo sapiens*. This is the meaning of "Then the Lord God formed man of the dust of the earth" (*Genesis 2:7*). Then, at the crucial moment, when the form is ready to receive, God once again creates *ex nihilo* in what the Torah describes as ". . . and [God] breathed into his nostrils the breath of life and man became a living soul" (*Genesis 2:7*).<sup>16</sup>

Further evidence of the consistency of the Creator in His "work methods" is the growing consensus among cosmologists that the processes being observed in outer space can best be described as *evolutionary* even though we have no idea as yet of the mechanism.

The process that hoisted the universe from the relative uniformity of the Big Bang to the incredible variety and diversity we see today in the sky seems more properly to be described as evolutionary. . . . Not only do galaxies evolve chemically, their stars brewing hydrogen and helium into heavier elements so that old galaxies are more chemically complicated and varied than young ones but galactic evolution results from processes operating across entire clusters of galaxies. Molecules are built within the interstellar thunderheads known as giant molecular clouds and in planets. . . . The very laws of nature seem to have evolved from simpler original laws. . . .<sup>17</sup>

Since these heavier elements are necessary for the appearance of life, in the absence of any mechanism to explain why galactic evolution took this direction we might attribute it to Divine Guidance. And if our present laws of nature evolved from simpler original laws, then here too

we might ask: how is it that the laws that have evolved are just those that make possible the appearance and development of intelligent life?

But probably the most significant implication of the insight that *guided punctuated evolution* is one of the ways of God is its usefulness in the understanding of history. After all, God in the Torah is active not only in nature but in human affairs as well. One of the most important emphases of the Bible is on man's obligation to perceive and celebrate the mighty acts of God in our national history: the Exodus from Egypt, the wandering in the wilderness, the conquest of Canaan, the destruction of the Temples. These individual historical events ascribed to Divine agency are effectively linked together and tell an interconnected story of God's plan for, subsequent disappointment with, and punishment of the people Israel. However, at the point where the biblical narrative breaks off (*circa* 450 BCE) we are left without a story-line! True, the believer is left with the promise of an ultimate messianic redemption, but he has no criteria, no map by which to judge the significance and direction of the events during that long stretch of about 2,000 years that have elapsed since then. Of course, God is active behind the scenes but what method is He using? What is His strategy? Will the Redemption, when it comes, have any connection with the events that preceded it?

Operating almost exclusively with the principle of reward and punishment, most traditional Jewish thinkers were prevented from discerning any pattern in Jewish post-exilic history or from discovering any line of growth or development. The believer is simply to fear the Lord, keep His commandments and hope that when enough people are deserving God will send His Messiah to redeem Israel and the world. These were the only parameters of significance by which to view and to evaluate what was happening in the world.

Perhaps, however, the teaching of *Genesis* that *guided evolution* is one of the ways of God should be applied to our understanding of human history as a whole. Perhaps our focus has been too narrow, concentrating exclusively on what was happening to the Jewish people. We forget that while the Jewish people were in a sort of political limbo, driven or wandering from country to country and from continent to continent, the victims of anti-Semitism in all of its virulent forms, there were evolving painfully and gradually the political institutions of democracy and the methodology of modern science and technology which together are the positive elements in the culture we call modernity.<sup>18</sup> It is precisely these conditions that made possible today the development and dissemination of Torah in all of its different aspects and the return of the Jewish people to its land as a sovereign state.<sup>19</sup>



## THE STORY OF THE FLOOD

While in terms of language the story of the Creation, according to our interpretation, turned out to be closer to the literal and the story of the Garden closer to the metaphorical, the story of Noah and the Flood at first glance seems rather equivocal. Its location prior to the stories of the Patriarchs, where one might say real history begins, would appear to suggest that the story of the Flood belongs to those early developments in the history of man which are at best only hinted at. For example, the story of the Tower of Babel, which appears after the story of the Flood but before the story of Abraham, while presumably about a particular tower in a particular valley called Shinar, has all of the signs of being essentially a metaphor about a certain type of civilization with which God seems displeased. Also the first four verses of Chapter 7, which have so far eluded credible interpretation and which speak of strange human types, seems to be an introduction to the story of the Flood.<sup>20</sup> Terms such as “sons of God,” “daughters of men,” *nefilim* (giants?), “mighty men” suggest a prehistoric setting, i.e. that they refer to earlier forms of hominids who, it is currently believed, may have coexisted with man. Yet the story of the Flood opens with God commanding Noah to build a seaworthy craft, giving specifications as to size, material and waterproofing. Similarly, the many details as to dates, how long it rained and the specific incident of the raven and the dove seem to be descriptions of an historical event. However, as we have indicated earlier, the presence of unrealistic elements in the story should alert us to the possibility of metaphor. As Nahmanides has pointed out, the logistics of fitting all the animals into the Ark, the task of caring for them and then converging on their own and marching into the Ark in the desired numbers seem to invoke the miraculous. The judgment, therefore, has to be made whether to adopt a historical interpretation in many ways miraculous or, as I shall argue, to see it as metaphor. Involved here is the difficult question as to whether we can deduce from the Torah criteria as to when and under what circumstances Providence resorts to miracles.<sup>21</sup>

But if the Deluge tale is a metaphor, what is it a metaphor of? What is the intention of the Torah in telling us the story of the Flood? We wish to suggest that this type of metaphor is designed to call our attention to that which is universal in the story; that aspect of the event that makes it an example of the kind of thing that has happened many times before.<sup>22</sup> Scientific research has revealed that the development of life forms on this planet was not an even, gradual process but one punctuat-

ed by several violent mass extinctions in which over ninety percent of once existing plant, marine and animal genuses were wiped out. The last such mass extinction is said to have taken place 65 million years ago and included the dinosaurs as well as forty percent of marine genuses. The causes of these destructions were sharp changes in sea levels and climate, volcanic eruptions and the impact of asteroids. The last Ice Age took place about 10,000 years ago, well within the orbit of human memory, and may have registered on the collective human subconscious.

Perhaps, therefore, the story of Noah and the Flood is to be understood not as an historical description of a particular world-wide deluge that took place somewhere between 4000-5000 BCE, but as a metaphor to give the Torah's view of all the destructions and mass extinctions which took place on the planet from the very beginning. And the teaching is that it has been Divine Guidance that has ensured the evolution and survival over vast stretches of time of just those plants, marine life and animals that do not block the appearance of man, those that are useful, and that strain of man in whom a moral spark had taken hold.

However, it has remained for modern science to bring to light some interesting facts about the origins and development of different human societies which may give us some insight into some further implications of the Flood story. In a recent fascinating work, Jared Diamond sets out to explain why it is that history proceeded so very differently for peoples in different parts of the world.<sup>23</sup> Why is it that today certain societies in particular parts of the earth enjoy all the benefits of what we call "civilization", while others still have non-literate farming societies and still others have remained hunter-gatherers that use stone tools? Diamond's research shows that "history followed different courses for different peoples because of differences among people's environments (geography, climate and the flora and fauna) and not because of biological differences among people themselves."<sup>24</sup> A comparative survey of the history of the different continents and geographic areas in the world reveals that what has been called the Fertile Crescent (the land of Israel, Mesopotamia and reaching into Anatolia) was the earliest locale for a whole string of developments in the history of civilization: cities, writing, empires. Diamond explains this by the fact that the people in this area had a "head start" in that they were the first to experience two basic developments, two giant steps in the human economy:

- 1) The transition from being dependent on food secured by a system of "hunting and gathering" (hunting wild game or scavenging and gathering wild fruits and grains) to actual food production (the cultivation of food plants on a regular crop basis).

- 2) The domestication of animals for food, traction and transportation.<sup>25</sup>

Diamond goes on to demonstrate that once a society has achieved these two fundamental developments, it rapidly goes on to the next stages: a sedentary population, cities, a ruling class, a bureaucracy, and professional craftsmen and soldiers—all that we associate with civilization.<sup>26</sup>

Now let us take the question back one step and ask: What was it about the Fertile Crescent that enabled its people to be the first to develop food production and domestication of animals? Scientific research shows the following: In the Fertile Crescent and only in the Fertile Crescent were the wild ancestors of all of the eight important food plants to be found in abundance. These were: Emmer wheat, einkorn wheat, barley, lentils, peas, chick peas, bitter vetch and flax. These, many of which are self-pollinators and high in protein, were discovered, gathered and later cultivated by farmers as crops. Also in the Fertile Crescent were the wild ancestors of today's goats, sheep, cows and pigs, the most valuable and easily domesticable mammals. These were already domesticated in this area by 6000 BCE. The horse and the camel came much later. What this means is that "the crops and animals of the Fertile Crescent's first farmers were able to meet humanity's basic economic needs: carbohydrates, protein, fat, clothing, traction and transport," giving the area a head start in the development of the later stages of civilization.<sup>27</sup>

What is the relevance of all this to the story of the Flood? Let us point out two aspects of the story that we have not yet mentioned:

- 1) Noah in his ark was carrying not only animals of all sorts but also selected grains, plants, shoots and seedlings, as food for himself and the animals and also to transplant them in the soil of the post-diluvian world.<sup>28</sup>
- 2) The Torah finds it important to mention where the Ark came to rest: "And the Ark rested upon the mountains of Ararat" (*Genesis* 8:4). That is to say, those in the Ark disembarked and its contents were unloaded in the area of the Fertile Crescent.

If we factor in these findings of modern science as to the role of the land of the Bible in the development of civilization and the reasons for it, we arrive at a better understanding of what the story of the Flood comes to teach us. It is to be understood as a kind of metaphor in which the relationship between the story and what it stands for is analogical. Was there really a world-wide destruction? Not once but many times! And every time it happened certain life forms, plants and animals survived *thanks to man*. That is to say, those which were inimical to the

evolution of man became extinct; those useful to man survived. But in the midst of these general teachings about Divine Guidance during the world's many destructions there emerges a truth about a particular geographic area which was also a consequence of Divine Guidance. At the conclusion of these upheavals and disruptions, drastic climate changes, floods and ice ages, and the redistribution of plant and animal life it appears that a certain corner of Asia Minor received the best of what had been selected to endure. "And the Ark rested on the mountains of Ararat." While ultimately all mankind benefited from who and what survived, a particular geographic area was especially favored. This explains why it is in this area where the story of civilization first begins, where it first fails and where Divine wisdom initiates the process of amelioration: "And the Lord said to Abram: Get thee out of thy country . . . unto the land that I will show thee" (*Genesis* 12:1).

In summary then, how is the believer to understand the literary character of these three pivotal stories in *Genesis* whose texts continue to engage us as we reread them in the light of scientific discoveries and philosophic refinement?

The story of Creation as contained in the first 31 verses of *Genesis* is an historical description, in common-sense language, of what happened during that singularity. However, in view of the unique nature of the event and the fact that some of the findings of science are counter-intuitive, the terms used must be "stretched" considerably so that the text may accommodate the discoveries of cosmology. We are given this description of *how* God created the world in order that we may learn "His way" in nature and history, which is a way of *guided evolution*. Once we know this, we can discern and appreciate His kindness in the past and try to detect the direction towards which He beckons in the future.

The story of the Garden of Eden is a metaphor in which object-language is being used to express a content for which language as such is really inadequate. It is an attempt to say something about the nature of man, the origin of evil and to explain the difficult condition of man on earth. Thinkers continue to wrestle with the story and search the text for insights into these perplexing theological questions.

The story of the Flood is a metaphor structured as an analogy to tell us about all the destructions and extinctions which occurred in the prehistoric past. It is a story about the survival of the deserving and of those aspects of the universe (the climate, stability and flora and fauna) which are prerequisite for man's development on earth, materially, socially and culturally. It also explains why the rest of the biblical story

takes place in the Fertile Crescent. Most important, it tells of a divine covenant with man, in which the stability and regularity of nature is guaranteed.

## NOTES

1. *Sanhedrin* 34a; see also the commentary of Menahem haMeiri on *Avot* 3:14 and Maimonides, *Guide for the Perplexed* 2:25.
2. See Joseph Margolis (ed.), *Philosophy Looks at the Arts*, revised edition (Philadelphia: Temple University Press, 1978), pp. 289-362. Netsiv (R. Naftali Tsevi Yehuda Berlin of Volozhin) in his introduction to his commentary (*HaEmek Davar*) on *Genesis* observes that from the fact that the Rabbis applied the term *shira* - "song" or "poetry" to the entire Torah (*Nedarim* 38, *Deuteronomy* 31:30), it may be inferred that the text may assume the form of metaphor.
3. *Berakhot* 31b, *Shabbat* 63a. See also Y. Maori, "The Approach of Classical Jewish Exegesis to *Peshat* and *Derash*," *Tradition* 21 (Fall 1984). I do not deal here with the view that the Torah may contain a level of meaning called *sod*, esoteric or secret meaning known only to initiates.
4. See the discussion in the commentary of Isaac Abarbanel on this chapter.
5. See the interpretation of Malbim on this chapter.
6. See the illuminating comments of Martin Buber, *Good and Evil* (New York: Charles Scribner's Sons, 1953), pp. 67-80.
7. The philosophic age may be said to have started with Plato and Aristotle when abstract philosophical questions began to be analyzed in a rational and critical manner, separating out the empirical, the logical and the metaphysical elements.
8. See Joseph Albo, *Ikkarim* 1:12, Yehezkel Kaufmann, "The Biblical Age," *Great Ages and Ideas of the Jewish People*, Leo W. Schwarz (ed.), (New York: Random House, 1956), pp. 8-14. "For all the gods of the peoples are things of naught; but the Lord made the heavens" (Psalms 96:5).
9. The Rabbis had already raised the question: "With ten Sayings the world was created. Could it not have been created with one Saying? What does this teach us?" (*Avot* 5:1).
10. See Steven Weinberg, *The First Three Minutes: A Modern View of the Origin of the Universe* (New York: Basic Books Inc., 1977).
11. There is a lucid discussion of the interesting views of Rav Kook on science and creation by Professor Sholom Rosenberg, "Introduction to the Thought of Rav Kook," in *The World of Rav Kook's Thought* (Ami Chai, 1991), pp. 88-97.
12. Gerald L. Schroeder, *Genesis and the Big Bang* (New York: Bantam Books, 1990); Nathan Aviezer, *In the Beginning; Biblical Creation and Science* (Hoboken, NJ: Ktav Publishing, 1990).
13. The "ways of God" (*derekh Hashem* or *darkei Hashem*) has three different meanings in the Bible. Sometimes it refers specifically to the moral ways of God, as in *Deuteronomy* 10:12 and in *Genesis* 18:19, sometimes to God's way in nature and history, as in *Exodus* 33:13, and sometimes to the way in

- which God wishes man to walk, as in *Exodus* 18:20.
14. See Timothy Ferris, *The Whole Shebang*, (New York: Simon & Schuster, 1997). For differing views on the compatibility between Judaism and evolution, see A. Carmell and Cyril Domb (eds.), *Challenge: Torah Views on Science and its Problems* (Feldheim, 1976), Section II, "Creation and Evolution," and Lawrence Kaplan, "Torah V'Madda in the Thought of Rabbi Samson Raphael Hirsch," *BDD* 5 (Summer 1997).
  15. See Schroeder, *op. cit.*, chapters 7 and 8, and Aviezer, *op. cit.*, pp. 72-74
  16. Science has no explanation for the sudden appearance of modern man. See Aviezer, *op. cit.*, pp. 92-93. A recent article in the journal *Cell* reported an experiment by a Dr. S. Paabo of the University of Munich in which a DNA strand of a Neanderthal skeleton was compared to that of modern DNA. The differences were found to be vast, suggesting that *homo sapiens* and Neanderthal, although they were for a while contemporaneous, did not interbreed. Thus *homo sapiens* most certainly did not gradually "descend" from the Neanderthal.
  17. Ferris, *op. cit.*, p. 173 and 199.
  18. "The concept of 'historical explanation' as explaining an event only after it has happened but not being able to predict it, causes us to think of God's reply to Moses when he asks that "I be made to know Thy ways." The Lord answers "...And thou shalt see My back but My face shall not be seen" (*Exodus* 33:23). See Stephen Jay Gould, *Wonderful Life* (New York: W.W. Norton & Co., 1989), pp. 278-289.
  19. I apologize to the reader for barely hinting at a general theory of history which I have developed and hope will appear shortly. See "Providential History and the Anthropic Principle" in a forthcoming issue of *BDD, Journal of Torah and Culture*, Bar Ilan University.
  20. See the interpretation of Malbim on *Genesis* 7:1-4.
  21. See Rambam, *Hilkhot Yesodei haTorah*, chapter 7, and the comments of Gersonides on *Joshua* 10:12-14.
  22. See Northrop Frye, *The Great Code: The Bible and Literature* (New York: Harcourt Brace Jovanovich, 1981), p. 46.
  23. Jared Diamond, *Guns, Germs and Steel: The Fates of Human Societies* (New York: W.W. Norton & Co., 1997).
  24. *Ibid.*, p. 25.
  25. *Ibid.*, Part 2, pp. 83-176.
  26. The Torah seems to emphasize the importance of food production and animal domestication by associating these with the beginnings of human history: "Abel was a keeper of sheep and Cain was a tiller of the earth" (*Genesis* 4:2).
  27. Diamond, *op. cit.*, p. 142.
  28. See *Genesis* 6:21 and *Rashi* on *Genesis* 9:20.