

Evolution Shabbat
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Jonathan Selinger
Professor of Chemical Physics
Kent State University

For this Evolution Shabbat, Rabbi Stone asked Eric and me to speak with the congregation about the relationship between science and religion, particularly concerning evolution and the origin of life. Eric has already told you about the scientific basis for evolution, and he's also told you about what scientists mean by a "theory," as in the "theory of evolution," and how that's different from the meaning of the word "theory" in daily life. For my turn, I would like to speak about Jewish teaching on evolution and related issues. In particular, I'd like to tell you about something that is *not* a problem, and then about something else that, I think, *is* a problem.

First, the non-problem...

Why do so many religious groups have a problem with evolution? Why are there *still* so many people, across the country, even in the 21st century, who are trying to limit the teaching of evolution in schools, who are trying to replace or supplement it with the Biblical story of creation, either in its original form or disguised as "creation science" or "intelligent design"? I think it comes from a very narrow view of religion and of religious morality. Their idea is that the only reason for behaving morally is that the Bible tells you to. By that argument, if the Bible isn't literally true then the whole system of moral guidance falls apart. They have to believe in every word of the Bible, or society will totally degenerate. From that point of view, the Bible begins with the story of seven days of creation, and so it must have happened that way, in seven 24-hour days. Any scientific research that disagrees with this story—whether evolution or geology or astronomy—is a threat to the moral life of society and must be rejected.

The question is: Is that a Jewish point of view? Well, of course, Jewish points of view are very diverse. When I started reading about this question, I found a lot more Jewish views than I expected. As always, there are Jews on pretty much every side of any issue. However, the mainstream of Jewish thinking supports a much broader understanding of science and religion. This broader understanding goes back hundreds of years, long before Darwin, to the writings of Maimonides. Maimonides was the great rabbi, physician, and philosopher of Spain and North Africa in the 12th century. In his writings, he unified Jewish thought with the science of his day. In particular, he wrote that "what the Torah writes about the Account of Creation is not all to be taken literally, as believed by the masses" (Guide to the Perplexed). Rather, he said "we should endeavor to integrate the Torah with rational thought, affirming that events take place in accordance with the natural order wherever possible" (Letter to the Jews of Yemen). Keep in mind that Maimonides didn't know about evolution, he was thinking of the much earlier science of Aristotle. Nevertheless, it seems to me that he wouldn't be shocked by evolution. Rather, he would say that Jewish teachings on morality can stand by themselves, and don't depend on assuming that every word of the Bible is literally true.

In the modern age, one of the most interesting statements on “Creation, Evolution, and Intelligent Design” was issued in 2005 by the Rabbinical Council of America, which is the council of orthodox rabbis. Well, American Modern Orthodox rabbis. They have stated specifically that “evolutionary theory, properly understood, is not incompatible with belief in a Divine Creator, nor with the first 2 chapters of Genesis.” They further note that “Judaism has a history of diverse approaches to the understanding of the biblical account of creation.” Even among the orthodox, some Jews believe that God created and destroyed many worlds before the current epoch. Others believe that the word “yom” or “day” doesn’t necessarily mean a 24-hour day, but might be a longer period—as the Psalms says, “A thousand years is like a day in Your sight” (90:4). The orthodox rabbis note specifically that nothing in the fundamental Jewish teachings about morality depends on specific scientific results. If there’s new science next year, our fundamental beliefs about morality will remain the same.

In a sense, the non-problem between the Biblical story of creation and the theory of evolution is analogous to the Torah portion that Ben Margalit read for us tonight. In this parsha, the Torah gives a lot of numbers for the size and shape and weight of the first menorah. Ben points out that the numbers don’t work; it would have been impossible to build that menorah with so little gold. Likewise, the book of Kings refers to a molten vessel that was 10 cubits in diameter and 30 cubits in circumference. Should we interpret this passage to mean that $\pi = 3$? Is that a Biblical mathematics that should be taught in the Hudson public schools? Of course not. We can just say that people had only a limited understanding of mathematics back then, but we can appreciate what they accomplished in developing the morality that we still live by today.

So far, I have told you about what I think is *not* a problem between Judaism and evolution. Now let me briefly mention what might actually be a problem. Here I’m just speaking for myself, and I admit that I don’t have Jewish sources to back me up, but please bear with me.

Much of Judaism is based on making distinctions. At the end of Shabbat, we have the *Havdallah* service, and the word Havdallah means *separation*, distinction, between Shabbat and the work week, between the sacred and the profane. Similarly, we have fundamental distinctions between God and humans, between humans and animals, and between life and non-life. By contrast, science tends to blur these distinctions, to say that everything is a gray area. For example, my own field of liquid-crystal research is based on the idea that the world isn’t just made of solids, liquid, and gases. Rather, there are other states of matter that are in between solids and liquids.

We can make a similar point about evolution. In Judaism, we assign a special moral status to humans. It’s an equal moral status for all humans, regardless of race, regardless of physical or mental handicap. However, biological science tells us that humans evolved from other types of animals, and we can dig up the fossils to prove it. From the religious point of view, we are *lucky* that there is a big gap between humans and our nearest animal relatives, the apes, so that we can say that there is a fundamental moral distinction between humans and animals. However, the world didn’t have to be that way. Just imagine that some of the early stages in human evolution were still out there. Suppose we found an island with Australopithecus or Neanderthals. What would we do then? Would we consider them as humans or animals? What rights would they have? Our world has a bad enough problem with racism as it is, when all humans have

about the same capabilities. It would be a moral nightmare if the distinction between humans and animals were more blurred.

This hypothetical moral problem associated with evolution reminds us of real moral problems that occur all the time in the modern world. At the beginning of human life, when we have to decide what rights to associate with a fertilized egg or an embryo or a fetus at various stages of development. And at the end of human life, when we have to decide what to do with our loved ones when the brain has died but the heart still works, or the heart has died but the brain still works. In all of these cases, we would like to have a sharp distinction between life and death, but modern science tells us that it's just more complicated than that.

So that's the problem. Now you ask: What's the solution? Well, I'll tell you: I don't know. But I can make one suggestion: I think we can learn something important by noting what's in common between way that scientists work and the way that Jewish scholars and students have worked for hundreds or thousands of years.

The practice of science requires a certain humility, a sense that I will put forward my theories to be tested experimentally, and I'll wait to see what happens. If the experiments don't agree with the theory, then I have to set aside the theory and go back to the drawing board to develop a new theory. In that sense, science progresses through a constant dialogue between theory and experiment.

Likewise, over the years, much of Jewish teaching has progressed in the same way, as a constant dialogue between questions and answers, between rabbis and students. Many of our texts preserve the dialogues from centuries ago. For example, every Passover we read that Rabbi Eliezer said that each plague was really four plagues, but Rabbi Akiva said that each plague was really five plagues, and so forth. Expressing our Jewish teachings in this way gives the same kind of humility—a sense that we're not following a rigid dogma, but rather we are open to dialogue. In particular, we're open to dealing with the opportunities and challenges that science brings us, with our eyes open, and with respect for all humanity. That's not a final answer, but perhaps it's the best we can do.

Ken Yihe Ratzon. May it be so. Amen.