Avoiding Miracles and Emphasizing Naturalism in Science Teaching

by
Salman Hameed

(first published at Muslim-science.com)

Some of the most challenging and exciting areas of research deal with various forms of 'origin' questions. Origin of life. Origin of the Earth. Origin of human beings. Origin of consciousness. And of course, the origin of the universe. These are not only hard problems but also represent some of humanity's biggest questions. It is no wonder then that these 'origin' questions not only capture the attention of scientists and general public alike, but often also serve as the conduit into science for budding scientists in high schools around the world.

But these questions also straddle the boundaries of science and religion. There is perhaps an inherent tension here between the limits of knowable science and the beginnings of unknowable mysteries. For most people, this tension doesn't impact their daily lives. Since the belief in miracles is quite common not just in Muslim societies but all around the world, it is easy to ascribe origin mysteries, and other unexplained occurrences, to the Divine. A medical doctor or an engineer may still approach their work in a pragmatic way without being affected by their outlook on 'origin' miracles.

For a scientist or a scientist in training, such an approach poses problems. I have run into students and educated individuals who take pleasure in the failure of science to provide answers. The origin(s) of life, in particular, is an area in their crosshairs. I can understand the desire for this. To use a sports analogy, science has been so successful in explaining physical phenomena, that there is an urge to root against it. If for nothing else but to say "See - science doesn't have all the answers". Unfortunately, they often go one step further and ascribe God's miraculous action as the default alternative to the as yet unsolved problem, thus unwittingly creating an either/or relation between science and religion.

Indeed, scientists do not know how life started here on Earth. But science usually thrives on the boundaries of failures and unknowns. After all, it is these very areas of unknowns that become fertile grounds for future PhDs that end up solving hard problems. A resort to a belief in miracles in such instances would in fact be anathema to this whole enterprise.

We can take lessons from history of science. Just a few centuries ago, the origins of the Earth and the Solar System were considered problems beyond the limits of science. Today, we have an excellent scientific understanding of the formation of the Sun and the planets that make up our Solar system. No gaps, no miracles. In fact, I find the 'nebular theory of the formation of solar system' to be quite beautiful, as it elegantly explains not only the origins of rocky and gaseous planets, but it also elucidates the reasons why planets have particular rotations around their respective axes, and the origins of asteroids and comets. If one desires, the elegance of the physical laws behind the explanations can indeed be attributed to the Divine, but the rest is fully explained in a naturalistic framework.

In order to produce good scientists at a consistent level in the Muslim world, we have to instill a mindset in science classrooms that eschews the notion of miracles when it comes to the physical world. All unsolved problems, including those at the boundaries of science and religion, may then be approached within the framework of *methodological naturalism* - an assumption

that for practical purposes, all causes are empirical and natural. At the same time, we must appreciate that beliefs in various historical miracles are also central to most religions, including Islam, and numerous rituals, tenets, and practices revolve around these very beliefs. In this sense, a belief in miracles is about religion and not about seeking a physical explanation of how the world works.

But this is a fine needle to thread. After all, how does one demarcate the domains of miracles and science? And if one accepts that there is a precedence of violation of physical laws (I'm using miracles here in this particular sense) in history, it is easy to extend such explanations to the present as well. Furthermore, for many, the questions of 'origin of life' fall squarely in the miraculous domain, and it is the encroachment of science, that is the problem. And yet, the introduction of miracles as an explanation is an end to scientific inquiry.

This is a hard problem. But a Deistic/naturalistic approach to the physical world may be essential to building an effective scientific culture in the Muslim world. There cannot be an end to inquiry - *especially* when it comes to 'origin' questions. A belief in miracles, in this sense, will have to be banished from any scientific question, but may still play a role in religious life. When it comes to the future of science in the Muslim world, this is an important needle to thread. I hope that the scientific answer to how life began on Earth (and perhaps on other planets) comes from a laboratory somewhere in the Muslim world.