

Nidhal Guessoum's Reconciliation of Islam and Science

with John Hedley Brooke, "Reconciling Religious Tradition and Modern Science"; Salman Hameed, "Walking the Tightrope of the Science and Religion Boundary"; Rana Dajani, "Evolution and Islam's Quantum Question"; Zainal Abidin Bagir, "Practice and the Agenda of 'Islam and Science'"; and Nidhal Guessoum, "Issues and Agendas of Islam and Science"

WALKING THE TIGHTROPE OF THE SCIENCE AND RELIGION BOUNDARY

by Salman Hameed

Abstract. *Islam's Quantum Question* by Nidhal Guessoum offers a sophisticated approach to reconciling the results of modern science with Islamic tradition. The book provides a valuable critique of existing literature on Islam and science and advocates the promotion of good science and science education in the Muslim world. A central tension in the book revolves around Guessoum's efforts to promote a version of *theistic science*, while at the same establishing a clear boundary for science and scientific methodology. Although the latter works very well, the project of *theistic science* presented in the book is, at the very least, contentious. However, *Islam's Quantum Question* is a milestone in the literature on Islam and science and should be valuable for anyone interested in the search for meaning in both science and religion.

Keywords: cosmology; Nidhal Guessoum; Islam; Islamic science; science and religion; theistic science

The Middle East is currently going through enormous changes. The "Arab Spring" of Tunisia and Egypt was led primarily by the young and educated. This is not entirely surprising, since mass education really took hold in the last two decades, and more than 50% of the population in the Middle East is under the age of 25. This generation is also asking the question, what does it mean to be a Muslim in the modern age? What does Islam have to say about the discoveries of modern cosmology and evolutionary biology? In this age of science, is there some room to scientifically accept miracles in the Qur'an?

Salman Hameed is Assistant Professor of Integrated Science and Humanities, Adele Simmons Hall ASH218, Mail Code CS, Hampshire College, 893 West Street, Amherst, MA 01002, USA; e-mail: shameed@hampshire.edu.

These are important questions for contemporary Muslims and have to be addressed urgently. It is rare, however, to have an open and nuanced discussion on these matters. It is therefore an absolute pleasure to read Nidhal Guessoum's *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science*. This is by no means the first book to tackle the issue of Islam and science. In fact, there is a plethora of books on the theme of "Islam and Science." Most of the books, however, have lacked serious scholarship, especially when it comes to science.

Two examples will illustrate this point. If you search for "Islam and Science" on the Internet, the top posts you will most likely find will be related to books that are devoted to finding evidence of modern science in the Qur'an. Called "*I'jaz*," this was first popularized in the late 1970s by French physician Maurice Bucaille, in his wildly popular (at least in the Muslim world) *The Bible, the Qur'an and Science* (Bucaille, 1976). Bucaille died in 1998, but this trend is now prevalent in the Muslim world. The claim of *I'jaz* usually works like this: a careful reading of the Qur'anic verses betray some of the discoveries of modern science, from quantum physics and Einstein's theory of relativity to plate tectonics and the expansion of the universe. According to *I'jaz*, if these ideas were embedded in the text from the seventh century CE, then this surely testifies to the miraculous nature of the Qur'an.

Another effort is centered on finding some sort of "Islamic Science." There is no unified view of that topic, but the proponents usually agree on the inadequacy of modern science to explain the world and the need for a scientific framework that includes the values of Islam. Lief Stenberg, in his superb 1996 book *Islamization of Science* (Stenberg 1996), focused on four scholars: Maurice Bucaille, Seyyed Hossein Nasr, Ziauddin Sardar, and Ismail al-Faruqi. Although Bucaille's emphasis is on finding science in the Qur'an, the other three provide a critique of modern science and offer an alternative methodology (a mystical/sacred science in the case of Nasr) and/or a framework that incorporates Islamic ethical ideals into the methodology of modern science. Significantly, none of these prominent figures have scientific credentials, and their writings have substantial shortcomings when it comes to the matters of science.

However, now there is a "new generation" of Muslim scholars who are trained as scientists and are actively engaged in the dialogue over Islam and Science. One such scholar is Nidhal Guessoum. He is an accomplished astrophysicist who takes his religion seriously. It is no accident that the first two chapters of his book are dedicated to the foundations of Islam—one on the concept of Allah and the other a scholarly and sophisticated take on the Qur'an. These chapters provide a nuanced view of Islam and some of its theological underpinnings. These chapters provide an exquisite balance between introducing these concepts to non-Muslims and raising the level of theological discourse for Muslims.

Perhaps most importantly, this book can serve as a guide for those Muslims seeking reconciliation between Islam and science with Guessoum as the inspiring role model. The first part of the book reads like the diary of a personal struggle to make sense of religion in the light of modern scientific discoveries. For me, reading this part was a personal joy, as I have grappled with some of the same questions while studying physics and astronomy for my graduate studies, and later as a professional astronomer. Although we share many of the same positions, I am equally fascinated by the divergence of our views on Islam and science.

It would have been easy for Guessoum to have simply written a book about Islam's relation to cosmology and evolution, themes that make up the second part of the book. I can imagine that such a book would have described the basic ideas of the theories, clarified the misconceptions, and then developed ideas around their compatibility with Islam. However, what makes this book unique is that Guessoum takes time to address existing ideas within Islam that may fall under metaphysics and are often beyond the purview of science.

The example of cosmology should help illustrate this point. Modern cosmology—the study of the universe—has been an established area of physics and astronomy for about a hundred years. Before that, cosmological viewpoints were often discussed solely within the domains of philosophy and/or theology. There is indeed a rich tradition of Islamic cosmology originating in medieval times. Guessoum notes a fascinating and diverse spectrum of views, ranging from those who were inspired by Hellenistic philosophers (al-Kindi, al-Farabi, Ibn-Sina, al-Biruni, and Ibn-Rushd), the views of Ikhwan as-Safa (the Brethren of Purity)—an esoteric society—who subscribed to the Platonic doctrine of emanation, and the more direct Sufi views of philosophers, such as ibn-Arabi, who believed that “the existence is one and it is identical to the Reality (or essence).”

But cosmology, as practiced today, is different. With the discovery of an expanding universe and the detection of cosmic microwave background radiation—the faint glow left over from the Big Bang—cosmology is now part of experimental science. There are specific predictions about the early state of the universe. It was much hotter and immensely dense. Particle accelerators across the world today routinely smash atoms together to momentarily recreate such conditions and look for predicted particles. The search for the Higgs boson (unfortunately dubbed “The God Particle”) at CERN, Geneva, is predicated on that principle.

Guessoum makes a clear distinction between ideas of medieval philosophers and modern cosmology. But cosmology, even in the modern form, impacts the worldview of religions. How does Islamic tradition cope with the discoveries of modern cosmology? What about claims of individuals like Bucaille, who use results from modern cosmology (such as the expanding universe) to prove the miraculous nature of the Qur'an?

In many ways, this is the central struggle of the book. Guessoum walks a fine line between the need to reconcile results of modern science with Islam and also to establish a clear boundary for science and scientific methodology. Although the latter works very well in the book, the former, it seems, is a work in progress and is also perhaps the most contentious part of the book.

Guessoum is an advocate of *theistic science*. He is well aware that contemporary scientists span a full spectrum of philosophical and religious positions, “ranging from mysticism, to belief in and personal relation with an acting God, a theistic philosophy, a deistic position, agnosticism and finally atheism” (97). However, he believes that theistic science can “provide a way out of the current multiple crises of science (ethical, environmental, social, etc.)” and “can constitute a possible ground for many (if not most) scientists across the world” (99).

What would this *theistic science* look like? It is not based on the earlier models of *Islamic Science* offered by Nasr or on the ethical critiques of Sardar and others, for Guessoum rightly dismisses those efforts as transgressing the methodologies of science, although they are innovative. He is, however, sympathetic to the views of Iranian physicist Mehdi Golshani, who wants to construct science on the “assumptions of the existence of a creator . . . and recognizes the existence of a moral order.” Similarly, Guessoum argues that a “less materialistic cosmology must be produced” that would “allow for some meaning and spirit to be found in the universe and in existence” (218). Although he believes that this contemporary theology should not clash with the results of modern science, this view of science is also sympathetic to finding the effectiveness of prayers, a discussion over miracles, Divine-action in the world, God-guided evolution, and a cosmological framework that includes God in its complete outlook. Such a theistic science, Guessoum argues, would also bring people of different religious faiths together and will be appealing to Muslim scientists.

I am somewhat skeptical of this approach. First of all, I think it will be a mistake to associate “meaning” and “morality” solely with the domains of theism. As demonstrated in the writings of the late Carl Sagan, the universe can inspire meaning in a nontheist framework as well. From this perspective, science should be independent of the metaphysical framework used to interpret the meaning of scientific discoveries. I can also understand if the goal of *theistic science* was to interpret findings of modern science from a theistic framework (just like such findings can be interpreted from an atheistic perspective). I believe that, despite having profound differences in their beliefs, Albert Einstein and the Belgian priest Georges Lemaitre found the same universe, just like Abdus Salaam and Steven Weinberg discovered the same unifying principle of forces despite having profound differences in their beliefs.

Similarly, it is unclear to me why questions of meaning must be attached to the explanatory framework of cosmology. After all, the expansion or scale of the universe is a matter of observational science and has as much meaning attached to it as laws of orbital mechanics. If one does want to see wonders of creation, cosmology is inspiring. On the other hand, one can see wonders of creation (and God) not only in the awe-inspiring scale of the universe, but also in the minute details of a flower or in the formation of an igneous rock. I'm not sure why "meaning and spirit of existence" would be diminished in this approach.

Second, even as a pragmatic strategy (not just a philosophical stance), the proposed *theistic science* may be risky for bringing increasing numbers of Muslims to do science. There already is a tendency of reading too much religion into science in the Muslim world, and such an approach is likely to spawn a number of variations of Islamic science and *I'jaz*, arguments that Guessoum has spent considerable effort debunking. Although Guessoum has been careful in distinguishing between *good* science and *bad* science, I am not so sure how such a vigilance will be maintained when the topic of the study is miracles or prayers—ideas that are at least at the outskirts of current science—as has been laid out in the third and final part of the book.

But Guessoum's reconciliation efforts go beyond the simple interpretation. His attempts involve changing science itself (for example, his view of theistic science) or looking for alternative theories to support a particular theistic vision. The latter is particularly apparent when discussing biological evolution. After acknowledging that the overwhelming majority of biologists accept Darwinian evolution (though he associates this acceptance with their ignorance of the problems with Darwinian evolution and their unfamiliarity with rival ideas), Guessoum spends most of his time on non-Darwinian evolution, which downplays natural selection and includes neo-Lamarckian ideas. Furthermore, he encourages Muslim scientists and thinkers to follow the path of the "theologically acceptable version of evolution" (324). But what if the theologically acceptable or unacceptable version of evolution turns out to be correct? (It is unclear if Guessoum considers Darwinian evolution—with an emphasis on random mutations and natural selection—acceptable or unacceptable to theology, but he correctly notes that it does not necessarily imply atheism.) How should Muslim scientists respond to that? If theology can later be reinterpreted to accommodate such a theory (or any accepted idea of science), then why not encourage Muslim scientists to follow the best possible science and let it not be tied to existing theological models?

Precisely on this point, *Islam's Quantum Question* is exceptionally strong in dealing with the science and the interpretation of the Qur'anic verses. For this purpose, Guessoum proposes a multilevel reading approach that allows people to "adopt different views and understandings of the same

verses” (331). This is especially useful when addressing human evolution and verses related to the story of Adam in the Qur’an. Similarly, he cautions against simplistic arguments of human centrality based upon fine tuning and the anthropic principle by stating that the “purpose of creation is divine reason, which will largely remain outside our understanding” (270).

I completely agree with both of the above statements. This is certainly the best way of protecting religion along with safeguarding the integrity of science. This can also be an argument for the separation of science and religion in line with Stephen Jay Gould’s Non-Overlapping Magisteria (NOMA) and ideal for young scientists growing up in religious societies.

My disagreements regarding the role of religion in science aside, *Islam’s Quantum Question* is a milestone in the discourse over Islam and science. Guessoum has done a fantastic job of summarizing the various Islamic responses to modern science. He is fair to those he has criticized, and he has a good grasp of science and philosophy. I highly recommend it to anyone interested in a serious discussion over faith, science, and the role of meaning in each.

NOTE

1. This classification of “new generation” comes from the recent work of Stefano Bigliardi (private communication).

REFERENCES

- Bucaille, Maurice. 1976. *The Bible, The Qur’an and Science*. Paris: Seghers.
- Stenberg, Lief. 1996. *The Islamization of Science: Four Muslim Positions Developing an Islamic Modernity*. Lund: Lund University.