

Review

The Young Muslim's Guide to Modern Science. By Nidhal Guessoum.
Manchester, UK: Beacon Books, 2017. 164 pages. Softcover, £12.95.

The Algerian astrophysicist and science popularizer Nidhal Guessoum, already known for his impressive publication record both in his professional field and in the debate on science and religion, summarizes his views in an agile book aimed at high schoolers and university students, self-explanatorily titled *The Young Muslim's Guide to Modern Science*.

The first chapter touches upon scientific literacy in the Muslim world. The picture painted is distressing (Guessoum starts with the story of a Saudi cleric who in 2015 notoriously claimed that Earth is stationary) but the author observes that scientific illiteracy is a global problem. What is special about the Muslim world is the presence of ultimately antiscientific or pseudoscientific debates ranging from Qur'anic literalism to academic critiques/rejections of science as intrinsically "Western." Guessoum points out that Muslim youngsters are thus presented with what he considers a false alternative: science *or* religion. Therefore, they either go for a "close-minded" version of Islam or for the rejection of Islam wholesale (p. 14). The second chapter contains a brief history of science, touching upon Muslim and Western scientists alike. The third chapter discusses the elements and methods of modern science, as well as some religious and philosophical critiques of science itself. Along with objectivity and testability, Guessoum emphasizes the importance of understanding science as a process. He upholds naturalism: the explanation of nature that does not rely on supernatural agents. Embracing this "pragmatic, neutral, and constructive stance" (p. 39) is not tantamount, according to Guessoum, to rejecting someone's beliefs in such agents. A specific section of this chapter is devoted to brief and clear definitions of key terms such as *hypothesis*, *fact*, *law*, *model*, and *theory*. Guessoum criticizes the views of Muslim scholars like Seyyed Hossein Nasr who reject science in favor of an understanding of nature that involves supernatural agents and that is based on concepts like "beauty" and "purpose" rather than on quantitative data. The fourth chapter is a compendium of "all the essential scientific knowledge that any educated person should have today" (p. 57), encompassing physics, astronomy and cosmology, and biology. Here, we find a basic explanation of atomic structure, Einsteinian relativity, quantum mechanics, the Big Bang, galaxies, stars and planets, cell structure, DNA, and evolution. The fifth chapter lingers on contemporary debates and discourses in which Islam and science are variously mixed: the idea that the Qur'an contains scientific notions revealed before their actual discovery, the aforementioned critique of modern science by Nasr, Islamic creationism. Guessoum observes that, although in contrast to the "West" such discourses are promoted under the template of a "harmony" of religion and science (indeed Nasr supports the resurgence of an alternative way of doing science, and Islamic creationism deems evolution as pseudoscientific), such approaches are erroneous. In brief, the "scientific miracles" of the Qur'an lead to a misrepresentation of science (as a collection of "facts") and

to overstressing the meaning of Qur'anic verses; Nasr's approach and similar ones fail to recognize the real method and power of science in favor of elusive notions, and creationism is blind to the proofs of evolution (besides the fact that it ignores Muslim authors who authoritatively reconcile the Qur'an and evolution). In order to attain a balanced approach one must, according to Guessoum, fully understand what the scientific method is all about, avoid a rigid reading of the Qur'an, rely on the Muslim authors who expanded on Islam and science, but also reject the atheist "propaganda" (p. 124) according to which science leads away from God. The sixth chapter outlines the momentous scientific developments ahead, the challenges they pose in practical and in theological-philosophical terms, and the Muslims' role therein. The search for exoplanets may confront us with the discovery of extraterrestrial life, our own existence is jeopardized by global warming, and genetic manipulations may be extended to human beings: all of this raises moral, ethical, and religious issues in which Muslims might have a lot to say. The seventh chapter emphasizes the importance of science in Islam specifically (as a way of knowing God through his creation, elevating humans, and improving their lives), but also its power as a collective process in which public control is a warrant against wrong theories. Recognizing the very limits of science and being humble is also crucial, according to Guessoum. The book ends with a plea for a healthy relationship between science and religion, in which the latter learns from the discoveries of the former, while scientists learn from religion "highly respectable and beneficial ideas" (p. 161). The book is complete with illustrations that help clarify the main issues at stake.

In my capacity as a philosophy instructor teaching a course on Islam and science at a Moroccan university, I heartily welcome Guessoum's book. To be sure, our agendas do not overlap totally. Guessoum is one participant, perhaps the most prominent one and quite surely the most productive one (if we exclude creationist plethoric output), in the debate over Islam and science. The details of his harmonization of Islam and science, that he entrusts to his aforementioned scholarly production, are under discussion and development. Most notably, his interpretation of miracles is controversial, but there are other delicate points such as divine agency. In the words of another scholarly observer of the debate, Guessoum is "walking a tightrope."¹

My goal, more modestly, is to convey the diversity of the contemporary viewpoints (including non-belief). However, every time I "fish" for prior knowledge on behalf of students I come across three standard, widespread views: "The Qur'an is in harmony with science: it contains scientific notions!"; "Evolution is a (Western) myth"; "Embracing science (evolution) entails rejecting religion." Clearly, each position contains and conveys a whole array of oversimplifications and distortions of science and religion. Guessoum's book is an excellent tool through which one can start clearing the air and conveying some sound notions both in terms of methodology and of specific scientific facts or theories. In fact, it exceeds the very scope identified by its title. Read at one level, of course, *The Young Muslim's Guide to Modern Science* is propaedeutic to the Algerian astrophysicist's specific, and debated, viewpoint, here expressed in a particularly accessible form. However, read more broadly, it can prove beneficial also to those laypeople (in things religion and science) who are not necessarily ready to subscribe to Guessoum's views but are still interested in enriching their understanding of modern science as well as

its relationship with religion/Islam. In this sense, the reader need not be “young” or Muslim and the text can be valuable also for instructors (at the secondary and higher levels) who are mainly interested, to put it in Guessoum’s very words, in spreading “correct knowledge and fine education and culture” (p. viii).

I have suggestions for expansions (in the form of sidebars) in case the book gets a well-deserved second edition. I would namely touch upon: (1) *miracles*: another “difficult” point that even laypersons are intuitively aware of; (2) *the Galilei affair*: a crucial episode (the importance of which goes beyond Western/non-Western categories) whose multiple layers and facets (scientific and historical) are often misunderstood; (3) *the distinction between ijaz* (the formal inimitability of the Qur’an) and *ijaz ilmy* (the aforementioned “scientific miracles”). Also useful would be (4) brief answers to antievolution “questions” and (5) brief profiles of prominent female Muslim scientists. Finally, because the debate on Islam and science frequently gets stuck in nostalgia for the greatness of the past “Golden Age” and/or in “blanket lamentations” over its current state, I would (6) add some paragraphs about exciting scientific programs currently fostered in the Muslim/Arab world, such as the Qatar Exoplanet Survey.

NOTE

1. Hameed, Salman. 2012. “Walking the Tightrope of the Science and Religion Boundary.” *Zygon: Journal of Religion and Science* 47: 337–42.

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