# *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"*

## PRACTICE AND THE AGENDA OF "ISLAM AND SCIENCE"

*by Zainal Abidin Bagir*

*Abstract.* When speaking about Islam and contemporary issues in science, Guessoum's *Islam's Quantum Question* shares many characterizations with Barbourian science and religion discourse. The focus is on theological responses to particular scientific theories. In this article I suggest an expansion of the discourse by looking at how science meets religion (as well as other local system of knowledge) in practice, in particular events such as natural disaster, when they are called upon as sources of meaning making. The encounter takes place not only at the cognitive level, but may take the form of competition, collaboration, or negotiation over the authority to provide explanation. In practice the authority is supported not only by objective knowledge but involves many other factors, including politics. Thus, part of my proposal for expansion suggests the broadening of how we understand science and religion to include how assertions of authority are made in practice.

*Keywords:* authority; Ian Barbour; Nidhal Guessoum; Islam; local culture; science and religion in practice

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"This Festschrift is dedicated to Ian Graeme Barbour, whose pioneering works in the 1950–1960s helped the creation of an interdisciplinary field of science and religion and whose works in the following 50 years have explored all its aspects deeply." This is the opening statement of what probably was the first *Festschrift* in the contemporary discourse on science

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and religion, *Fifty Years in Science and Religion— Ian G. Barbour and his Legacy* (2004).

Although Barbour certainly does not exhaust all things that can be said on science and religion, it is not difficult to agree with the above characterization of his works. My purpose in quoting that sentence is twofold. First, looking at Barbour, who is indicated to be involved in the moment of creation of the field, is a good way to get indications of how the field is defined in terms of its agenda, problems, and methodology. Second, I try to see how one could locate "Islam and science" discourse *vis a vis* the Barbourian "science and religion." In this attempt I find Nidhal Guessoum's *Islam's Quantum Question: Reconciling Muslim Tradition and Modern Science* as presenting not just another set of views on the topic—which he did quite well—but also an attempt to set the agenda of the discourse. Notwithstanding the fact that the two come from quite different religious and cultural backgrounds, I see Guessoum's approach to science and religion as sharing many things with Barbour's—in both its strengths and weaknesses.

In the last part of this paper, I shall suggest ways to expand the "religion and science" as well as "Islam and science" discourses. My two main proposals concern (1) addition of issues which are not much discussed in the discourse and (2) use of the approach that looks at science and religion not only in their cognitive dimension, as scientific theories and theological doctrines authorized by scientists and religious leaders/theologians, but also in practice. My examples will be cases in everyday life where science and religion (as well as other knowledge and/or value systems) meet as competing system of knowledge in people's meaning-making practices.

## Guessoum and Barbourian Discourse on Science and Religion

As a field of study, "religion and science" is still in its early stages. As such we can see that new works on science and religion continuously involve drawing and redrawing the boundaries, that is, defining the field. The drawing of boundaries involves, among other things, determining the main agenda (what's in and what's out) and setting up the methodology. In this regard, Barbour signifies a new wave of religion and science discourse, which started in the 1960s but only blossomed in the late 1990s and after, marked by the explosion of new books, new courses, and in general positive coverage by scientific journals as well as mass media. Barbour himself has developed the discourse for more than half a century, during a time when, in the Western world, religion was seen to lose its prestige to the present day when many scholars would call it a distinct academic field of study, not simply a side occupation of scientists and theologians.

Barbour's books have become major sources in courses on religion and science. They are translated into many languages and used in classrooms in the United States, countries in Europe, as well as in Indonesia, among Muslim students. His fourfold typology is quite popular; his critical realist methodology has opened up avenues for fruitful encounter between areas of science and areas of religion(s). Topics discussed in his books have given good ideas such that a wide variety of issues—not only the evolution controversy—can be discussed in science and religion discourse (for example, see Barbour 1997; 2000). In short, through his works people come to understand what "science and religion" is and what kind of work may be undertaken in this area.

The kind of discourse he initiated has several distinguishing characteristics. It is very sympathetic to religion (in contrast to attacks on religion by those Western writers on the subject since the late nineteenth century); it accepts basic theories and finding of modern science (vs. creationists since the 1920s), and many of its scholars are scientists and theologians. It looks at scientific theories and theological beliefs, and sees the relations between the two, mostly the impact of the former on the latter. However influential he is, it is to be expected that not all of what falls under religion and science, even limited to the Western, Christian context, is exhausted by Barbour. As I shall discuss later, there have been alternative approaches, although they have been less popular than Barbour's, which were meant partly as criticisms of him and partly as attempts to expand the discourse.

Nidhal Guessoum comes from very different social, historical, and religious backgrounds than Barbour does. As such, coming from such divergent experiences (of Muslims' ways of dealing with modern science), Guessoum takes up issues which otherwise are rarely included in the agenda of religion and science, and is involved in drawing a different set of boundaries of the area.

He covers a wide range of topics and reviews the major scholars engaged in this enterprise before proposing his Averroesian harmonizing proposal. Almost all the major topics that have been discussed under the rubric of "Islam and science" are dealt with here. The first part of the book deals with varieties of Muslim responses of modern science to issues such as the ideas of Islamic science and islamization of knowledge, but also those which are not as sophisticated but need to be dealt with simply because they are quite popular, such as the notion of "the scientific miracles of Qur'an"; it includes discussions of the most sophisticated Muslim metaphysicians to those apologetic authors writing for popular audience. One who is not familiar with the discussion of Islam and science at the popular level may wonder why he devotes so much, in different parts of the book, to the notion of "scientific miracles of the Qur'an." But this is needed for many Muslims whose idea about Islam and science is limited to exactly finding scientific supports for Qur'anic verses to show that it is

miraculous because it anticipated recent scientific discoveries. This trend is prevalent in many parts of the Muslim world and, based on Guessoum's own account, especially so in the Arab world. That makes the way he selects his main problems in the book, especially the second part, quite strategic, pedagogically speaking.

Guessoum rightly sees that such a huge variety of positions are engendered by different understandings of science and of Islam, including, for example, how to read the Qur'an in relation to current scientific facts and theories. This discussion becomes the foundation of the second part. It is in this part that he systematically takes up particular scientific theories, explains them quite well in nontechnical language, and sees how Muslims, equipped with good understanding of the theories as well as Islamic sources, could respond to them. The structure of the second part resembles Barbour's treatment in many of his works, where he elaborates many theological responses to major scientific theories and findings. It is also here that he shares some central characteristics with the Barbourian discourse. Guessoum is a scientist working in the global scientific enterprise, who sees no problem with major theories and findings of modern science; he is very sympathetic to religion, in which regards he distinguishes himself from the secularists such as Pervez Hoodbhoy or Taner Edis (Guessoum 2011, 13).

It needs to be pointed out that not many Muslim writers on Islam and science, except a few recent authors, are concerned with seriously looking at theological implications of particular theories. A more popular genre, especially the one which started in the 1960s, continued on until the late 1990s, and to some extent until today, is concerned more with the broad epistemological and metaphysical critique of *Western* science, which sometimes overlaps with, and sometime draws on, the Western critique of science.[1] The few who have taken up the issue of theological implications of science mostly take either apologetic defense of or strong attacks on the theories, which are based on not very sophisticated treatments of the theories, or even misunderstanding of them. Examples such as Mehdi Golshani and Bruno Guiderdoni, practicing scientists trying to make theological sense of the theories they are studying, are quite rare, and they are a recent development.[2]

In this regard, Guessoum is a refreshing voice. Before anything else, in his book (2011) he writes eloquently, passionately, and comprehensively for a popular audience, yet it also contains serious proposals on how Muslims should deal with contemporary developments in science. The book is quite useful for people not quite familiar with the terrain, or students of Islam and/or science.

Indeed, one may expect a more thorough treatment of the history and philosophy of science, as a prerequisite for a better understanding of the issues. Because the book tries to be comprehensive enough, his treatment of Islamic history, which comes up in all parts of the book, sometimes

looks too simplified. As an example, his statement that "Islam has in the past proven itself capable of *completely integrating* scientific knowledge into its own world view . . . " (xxvi, 2011, emphasis added) would be more productive if it is made more nuanced. What we clearly see in the history is series of struggles, and the good guy did not always win. Even Averroes himself, the hero of the book, was controversial, as actually some parts of the book show. However these criticisms may be unfair for a book which tries to cover such a wide terrain—and is already more than 400 pages thick.

In the end, Guessoum's harmonizing proposal[3] consists of several methodological stages or steps. The heart of the proposal consists of two steps: first of all, accept the methodology and theories of modern science in general and, second, one may add a theistic interpretation of the theories. There are two different activities of interpretation here, that is, of scientific theories and of relevant religious/theological beliefs. The last one is the Averroesian hermeneutic strategy of resolving potential conflicts between the knowledge read from the Qur'an and that which is attained by way of rational arguments, to forge harmony between science and religion.

As far as the issues discussed by Guessoum are concerned, I agree very much with many of his viewpoints. In another place I argue for the notion of metaphysical/theological ambiguity of scientific theories which opens up the possibility of such interpretative activities. This move would preserve the integrity of both science and religion, but motivates a further step, beyond what is necessitated by science, that is, an attempt to conceive a coherent view of the world (Bagir 2006).

Nevertheless, in terms of setting the agenda of Islam and science discourse, I propose we still need to expand the arena. Just as Barbour does not exhaust the whole field of science and religion, the kind of discourse proposed by Guessoum still leaves open some interesting and important areas for exploration, which can be justifiably included in the science and religion discourse.

## Expanding the Arena

Robert John Russell, in his introduction to the *Festschrift* for Ian Barbour, marks the field of science and religion in this way: "'Science and religion' stands for a rapidly growing international, intercultural, interreligious and interdisciplinary movement of scholars held together by their commitment to responsible dialogue and creative mutual interaction *between scientists and religious leaders*." (Russell 2004, xiii, emphasis added) It is this understanding of the field which I suggest needs to be broadened. The fact that many major figures working on religion and science are well grounded in a particular natural scientific discipline and theology is a strength, but probably a weakness as well. The fact lends strong legitimacy to attempts

to find constructive relations between science and religion. However this seems to result on the (over)emphasis on scientific theories and theology. The main methodological issue here (and it has pedagogical implications as well) concerns the strong inclination to focus on *scientific theories* (e.g., evolution, quantum physics, big bang cosmology, etc.) and/or *particular theological beliefs* (e.g., creation, divine action, etc.). This is surely not just about the actors, but also the conceptions of what science is and what religion is.

An attempt to expand the discourse necessitates broader conceptions of both. Literature accumulated in the past few decades in history and philosophy of science (including science and technology studies) are sufficient as the material for such a broader conception of science. Religious studies literature, which in the beginning takes (Western) Christianity as the model of religion, has struggled to conceive "religion" in ever-broader ways to make it useful as a term encompassing so much of the phenomena which may fall under the category of "religious." To put it in a simple summary, the result of such struggles have pointed to the scholars the necessity to view both science and religion not in an essentialist way, not limited to doctrines (theories or theological doctrines), not in their idealized form but also in the messiness of practice, represented not only by their supposedly authoritative representatives' voices, and as such looks at them as representing power and engaged in power struggles. Of course each of those characterizations needs justifications, which I cannot do here, but they are sufficient to indicate the directions of my proposal. Rather than elaborating the characterizations, I will here simply look at a few developments in science and religion discourse, which try to develop such more complex conceptions of both.

Stenmark (2004) puts forward an alternative to Barbour's popular typology by presenting a richer, more comprehensive, multidimensional model of how to relate science and religion—as the title of his book says. He suggests that each enterprise involved in science and religion is understood as having social (social practices), teleological (goals of both), epistemological (rationality), and theoretical ("contents" of both) dimensions. Another typology is proposed by Willem Drees in his *Religion, Science and Naturalism* (1996, 45). In his typology religion consists of cognitive contents, experience, and tradition, and the challenges posed by science are with regard to the new knowledge it produces, new views of knowledge and appreciation of the world. Looking at Barbour's fourfold typology from Stenmark's and Drees', it is apparent that the former concerns mostly the content dimension and does not pay sufficient attention (if not ignoring) other dimensions. Stenmark's analysis enables him to see that most recent discussions in science and religion focus on the impact of science to religion and leave out the other direction, from religion to science.[4] Drees' typology points to a third element of science's

challenge to religion which is not much discussed, that is how science affects our appreciation of the world, which is both theological and ethical. Drees' more recent book (2010) tries to put religion and science in context by looking at what religion might be and considers "religion and science as activities, rather than scientists and believers as persons" (2010, 3).

Another example of recent work which tries to draw different boundaries than Barbour's is William Stahl, et al. (*Webs of Reality: Social Perspectives on Science and Religion*, 2002) It focuses on the social dimensions of the issue. For Stahl, although the dominant discourse puts scientists and theologians as the main actors and the main subject matter is theoretical and abstract, social science can provide a way to examine science and religion, both as practices and as institutions, thus it may help to bring up the more practical problems. Questions about the separation of facts and values, for example, may get different answers when we look as the practices of science and religion. Similarly, as shown by Stenmark, the simplistic idea that science is rational and objective whereas religion is irrational and subjective, may be corrected by looking at the practices of each. Bold dichotomies usually exist only in idealization and are difficult to maintain in practice, which always opens the possibility of negotiation between the actors. Scientific theories or religious thoughts are not created only through encounters with their objects (natural or divine reality) but also, as Kuhn reminds us, through negotiations within its community of discipline (Stenmark 2004).

Both science and religion are not fixed entities, and do not exist in vacuum but always carry with them their social contexts. Interaction between the two are not only between their contents (of scientific theories and of religious beliefs), but also how they meet in practice, in concrete social settings. Social science, then, and here I include social studies of science as well as religious studies, will help us recognize the two and their interactions better, complementing the existing discourse. Social science is important in at least three senses: it is an instrument to understand both science and religion and their interaction in society and history; it helps us to look at the discourse itself from the outside; and it serves to help formulate ethics in response to issues raised by science.

Such brief reviews of only a few literatures are sufficient to show that what I call as alternative approaches have actually been there. Yet in my observation they have not been widely employed and have not received the attention they deserve, overwhelmed by the dominant discourse which privileges scientific theories and theologies.

## Illustration of the new Agenda

To give an illustration of the new agenda, I choose to focus on one concrete problem, which draws science and religion into contact in the process of understanding it (i.e., interpretations of natural disasters). Other examples

can be given, such as issues around the ethics and politics of human body, which are involved in formulation of bioethical decisions by ethicists but also lay people, but for the lack of space I cannot discuss them here. The starting point here is not particular scientific theories or theological issues, but concrete problems. The problems may simply be seen as starting points in a pedagogical strategy to engage science and religion. They mediate our experience and knowledge of nature and the way to give meanings to our encounter with nature. But beginning with practical problems can also be seen as offering a distinct approach in science and religion discourse. That is, one that makes use of the understanding of science and religion in practice as discussed above. It starts from problems and proceeds to elaborate on how science and religion meet in practice.

Broadly speaking, science is a way to make sense of nature; scientific knowledge is grounded in the experience of nature. But it is not the only source and there are other ways of experiencing nature. In addition, one makes sense of nature by also drawing from religion—and other sources of meaning as well, such as local cultures or any other value system. In this framework, science, religion, local cultures, or any value-system that are effective for certain individuals or communities are put on a par as sources of meaning making. Concrete problems (including in everyday life) become the arena in which different sources of meaning-making practices meet. Science and religion come into contact as they are called upon to make sense of human experience of nature. "Come into contact" may mean competition, collaboration, or negotiation over the authority to provide explanation, which in practice, as I shall show below, may immediately affect the way people live. As such, the modes of encounters of the two go far beyond and cannot be accommodated by, for example, Barbour's four positions on the relations between science and religion.

I am here combining two separate components of the proposals, that is, (1) to take up new issues or problems, such as natural disaster (which I illustrate below), but also similar problems such as those concerning the human body implied in bioethical decisions and (2) to broaden the conception of both science and religion.

In Indonesia, situated on the geological ring of fire, people's experience of nature is very much mediated by natural disasters. In a span of only a few years, many disasters have taken place. In December 2004, one of the greatest tsunamis (before the one in Japan in 2011) hit Aceh and Nias; from May to August 2006, several earthquakes took place in central and west Java, starting in Yogyakarta, and some of them triggered smaller tsunamis. Just before the earthquake in Yogyakarta which destroyed more than 150,000 houses and killed thousands of people, the most active volcano in the region, Mt. Merapi, erupted, which forced several villages in the area to be evacuated. Most recently, in October 2010-November 2010, Mt. Merapi erupted again. This time the eruption was the largest in 140

years. Besides those "natural" disasters, other kinds of disasters like floods, landslides, and forest fires have become almost routine at certain times of the year. These disasters are caused by environmental destruction such as illegal logging and the opening of new settlements. Another disaster which began in June 2006 is still continuing now as several villages in Eastern Java have been submerged by a flood of hot mud coming from inside the earth, as the result of gas drilling in the area (the cause, whether it is natural or human-made, is actually still debated, with consequences concerning who should be responsible for it).

Just like in other places, this kind of experience of nature has prompted people to ask important questions about the natural world, including theological questions. In these cases, one can see that people's understanding of nature is influenced by science, local culture, as well as religion. Natural disasters become an epistemological window to understand the society, nature, and people's religious understanding, as well as the interaction of science (as today's best empirical knowledge about the natural world), religion, and culture (from which most Indonesians draw as sources for giving meanings to events) in understanding and responding to the natural world.

An ongoing research project in Indonesia[5] on this issue shows, among other things, the intense interaction of the three sources of meaning-making practices (science, religion, and culture), which comes up vividly in the case of the last eruption of Merapi. In this case, a prominent local figure regarded as the "spiritual guardian" of the volcano, died. In the past he had defied warnings from the national volcanology center. He is also known as a Muslim leader in the village on the slope of the mountain (a mere five kilometers from the top of the mountain), yet also practiced old rituals which more conservative Muslim leaders see as heretical superstitions.

Some media and many scientists portrayed his defiance too simplistically as rational science versus irrational people. This competition was not an abstract theoretical one, but very real, and might even be deadly, as a small group of people who trusted the figure refused government's effort to evacuate—some were saved but others' lives ended tragically. However, it was actually not a fight between rationality and superstition but about which authority to be trusted, which is heavily influenced by the government's authoritarian conduct in the past, including badly arranged transmigration to other islands in Indonesia.

"Science" (as represented by the volcanology center and supported by the government, which also used the science to justify its policy) was indeed resisted. However, the group of people actually believed in what science could tell them about the volcano; it was not that they did not do rational calculation to save their lives. One way to explain it is that the people living on the slope of the mountain have a higher tolerance of the risks, making

them very vulnerable to the impacts of the eruption. It was not that they did not want to leave the area, but a question of when to do so. Such tolerance is influenced by their perception of whether the government would take care of their lives after they leave the area. Leaving the area means leaving all their property (farms, cattle, houses) to live in evacuation camps where they are at the mercy of government's assistance and other people, which is not always dependable. So leaving too early is not an option—the issue of course is when is "too early," and here scientists' and government bureaucrats' advice differs from the people's assessment. Their low trust of the government was compensated with the willingness to take higher risks, by staying longer until it became "almost certain" that they had to leave—for some it was just too late. It was actually only a difference in degree with the volcanology center's assessment (which, it needs to be mentioned, failed to provide accurate information in the past).

The issue became more complicated when some religious leaders also condemned them because these are Muslims who were regarded as "not truly Muslim" in believing the folk beliefs about the volcano and its eruption as a spiritual event. In the past religious leaders were also routinely mobilized to support governmental policies, though it did not seem to be the case in this particular event. In any case, what we see here is a competition between several sources of meaning-making activity, in which authority is accepted, not only based on the quality of the knowledge (objective, accurate, etc.) but also on trust (based on past experiences).[6] The people's vulnerability was partly created by the uncertainties produced in this complex competition of authority and trust.

*Disaster* is more than simply the occurrence of natural hazards such as volcanic eruption or earthquake. Such natural events turn to disaster when there are negative impacts on people because of their vulnerability, which, as the above story shows, partly consists of a complex interaction of social, economic, and political factors. In this understanding, the question of *natural* evil becomes less relevant, because much if not all of the evil coming from disasters, by definition, is nonnatural, in parallel with the people's source of vulnerability. Indeed, such natural events always become a fertile ground for reflection about nature and Divine Action; however, realizing that the seemingly natural evil may actually be structural, a science and religion discourse should also scrutinize how science, religion and, in the above case, local culture are intermingled in a competition for authority and trust.

Science and religion in this case are sources of meaning-making practices which interact, not only at the cognitive level, but also in a complex of social and political competitions and negotiations, and with other (local) systems of knowledge and values. This relation refuses simple categorization into typology such as Barbour's. Indeed, typologies are created usually as ideal types and needed for valid pedagogical reasons. But such a typology may

be much more limited than its proponents are ready to concede. It is also a reminder that reality is much more complex and messy and that we need to methodologically widen the arena to capture it. This approach makes it more difficult to make and use categories, as each of the components of science and religion discourse considered from broader perspective, yet it opens up a possibility of deeper explorations through development of new topics as well as enrichment of approaches.

## Concluding Remarks: What is "Science and Religion" for?

At this point we may raise the question about the objective(s) of science and religion discourse, lest such a proposal is considered misplaced. To return to Guessoum, we can discern some objectives he tries to achieve through his work. Part of his motivations to engage in science and religion enterprise is to find meaning in many scientific discoveries, which science itself cannot supply (2012, 217). He speaks about how "to defend a cosmological viewpoint that is both fully consistent with the modern theories and discoveries and in harmony with the fundamental religious principles" (2011, 216). "The challenge . . . is how to construct a theology that marries the religious conceptions of God (as a personal god) with a 'natural theology', which identifies God with the origin of the underlying orderliness of the cosmos, the basis upon which the universe was built." (*ibid.*)

A point I would like to make is that such a theology of nature (understood in a generic way to refer to religious view of the world) would be better formulated by considering problems I illustrated above. It would need to take into account our understanding of other facts of nature such as that which comes from interdisciplinary studies of disaster, which is always only partially natural. Understanding that "natural evil" is also human and structural should influence how we see expressions of divine action in the world which is (almost) always inseparable from human action. Our theology of nature has to answer not only to new understandings about the evolutionary history of the universe and especially our world, but also to issues like the explanation of natural disasters. This involves more than providing a theodicy but also the politics of such scientific and theological explanations (and for that matter also the complex theological-ethical-political knowledge of human body in bioethical issues).

Second, such a worldview is never only theological but also ethical, and even political. The theological and ethical dimensions of the discourse are like two sides of the same coin. This last statement may be understood simply as saying that theological discussions should lead to ethics; and ethical discussions should be founded on scientifically informed theology. But it may also more fundamentally mean that the two categories, the theological and the ethical, are actually not distinct. The dire environmental

crises, biomedical issues, or the occurrence of natural disasters, should be a context for developing a contemporary "Islamic theology of nature," which in turn would have ethical implications, just as it should be well informed by recent scientific developments in biology and cosmology.

It is there that constructive engagement between science and religion, in its many dimensions, is expected to arise. The new problems would pose difficult questions to religious intellectual traditions, the answers to which are expected to both help solve ethical issues involved and facilitate a better understanding of important theological issues: how does a certain religious tradition conceive of the natural world; what is the role of divine action; what is the cosmology of the body implied by a religious tradition; how could new knowledge arising from biology, life, and medical sciences be appropriated by that tradition? In answering all these questions, power relations which condition how science and religion interact in the real world will need to be taken into account to avoid an overly normative picture.

Engagement with those issues would be expected not only to help solve certain (ethical) problems, but also to help explore resources in religious traditions, and in contact with scientific understanding of nature, of earth and of body, could be expected to "revitalize" those traditions. What is expected to emerge from this endeavor is one step to the conceptualization of a religious worldview in a global (post)modern context with special attention paid to specific local contexts.

In general, it is clear that "science and religion" is not merely an academic field of study, developed as objectively as possible to garner new information or theories. Instead, people engaged in this multidisciplinary discourse usually are quite aware about its more practical—both the personal as well as societal—implications. The field of "science and religion" is important not simply for the sake of asserting how the two are in harmony (or can be harmonized), but because it represents two most important cognitive, cultural, ethical, and quite often also political, forces in many contemporary affairs. With this consideration, the objective of science and religion discourse goes beyond finding a coherent view of the world, but also includes the question how the two play (and should play) their roles in achieving a sustainable, just world. This in turn influences the way the boundaries of the field of science and religion—what issues are to be explored, what methodology to be used—can be drawn.

## Notes

1. This ranges from Seyyed Hossein Nasr and S. M. Naquib al-Attas since 1960s and 1970s, Isma'il Faruqi's idea of Islamization of knowledge, Ziauddin Sardar (and others he described as Ijmalis). Guessoum reviews this in some places in the first part of his book (2011).
2. Here I am referring exclusively to authors who write in English.

3. The proposal is already present in the book but not as lucidly as the way Guessoum presented it in his presentations (e.g., the ones I attended, in June 2011, in Sharjah; and in Yogyakarta in December 2011).

4. Though this is not directly related to my proposal, we can see that with different conceptions of science and religion, which underlies his typology, Stenmark has valuably raises an important debate which had not figured in the main stream of religion and science discourse. I am referring to a debate he initiated in his article on "religiously partisan science," which compares the Christian philosopher Alvin Plantinga's idea on theistic science and Iranian scientist Mehdi Golshani's idea of Islamic science (Stenmark, 2005). The article drew a comment from Golshani and a last response from Stenmark, all in the 2005 edition of *Theology and Science* journal.

5. The research at the Center for Religious and Crosscultural Studies, Gadjah Mada University, on "Understanding and Healing After Natural Disaster: Scientific and Inter-religious Reflections"

6. This story is partly told in Mark Woodward, "Indonesia: As Volcano Erupts, a Spiritual Loss." *Religion Dispatches*, November 2010, http://www.religiondispatches.org/archive/atheologies/3717/indonesia%3A_as_volcano_erupts%2C_a_spiritual_loss/; also by the same author: "Indonesian Volcano Update. Yes, It's a Religion Story. . . ." *Religion Dispatches*, December 2010, http://www.religiondispatches.org/dispatches/atheologies/3850/indonesian_volcano_update%3A_yes,_it%27s_a_religion_story . . . / Another story, titled "Science, Mysticism Meld in Predicting Mount Merapi's Deadly Eruptions," is available at http://www.pbs.org/newshour/bb/science/july-dec10/volcano_12–02.html?print.

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