

SOME IMPORTANT QUESTIONS CONCERNING THE RELATIONSHIP BETWEEN SCIENCE AND RELIGION

Mehdi Golshani

This article reports the results of a survey about the relationship between science and religion. Fifty-eight scholars and scientists respond to eight fundamental questions which cover some of the most important areas of science-religion discourse. The results of the survey show a remarkable similarity between views of leading scholars in the discourse.

Keywords: Science and religion discourse; definition of science and religion; warfare model; harmony between science and religion; Christian and Muslim perspectives on science; Islamic view of science.

Introduction

In 1996, I sent a questionnaire to a number of Christian and Muslim scholars, asking them to respond to the following eight questions:

1. What is your definition of science and of religion?
 2. Do you see any conflict between your definitions of these two concepts?
 3. Where do you think there may be a conflict between these two?
 4. What has been the grounds for the development of conflict between these two?
 5. What has been the role of religion in the development of science in the West?
 6. Can we have a religious science?
 7. Can science dispense with religion ?
 8. Can one separate the domains of activity of science and religion completely?
-

Mehdi Golshani, Professor of Physics, Sharif University of Technology, Tehran, Iran and Director, Institute for Humanities and Cultural Studies, Tehran, Iran;
Email: mehdigolshani@yahoo.com

The first round of responses, consisting of thirty-two contributions, was published as *Can Science Dispense With Religion?*¹ The third edition of this book, published in 2005, has been expanded to include a total of sixty-two contributions from Christian and Muslim scientists, philosophers, and theologians.

When I received responses to my questionnaire, I was astonished to find that there is a great deal of similarity between the views of the scholars involved. Of course, at the science-religion and science-theology conferences that I had attended since early 1990's, I had noticed a lot of common views between the scientists committed to monotheistic religions, but the responses reflected in this volume went far beyond my expectations. Here, I shall give a brief analysis of the answers given to my questions, mentioning the extent of agreement and disagreement.

The Definition of Science and Religion

In the questionnaire, "science" meant the sciences of nature. The definitions given by respondents could be summarized in the following form: "Science is the systematic search for understanding of the way the natural world is structured and functions." (**Ellis**).

Byl believes that science involves much more than empirical observation and mathematical analysis. He refers to the observational aspects of science as science 1 and to the theoretical extrapolation and explanation of these observations as science 2.

According to **Haught**, science seeks quantitative knowledge of recurrent natural routines on the basis of which practical prediction is made. In doing so, it deliberately leaves out any adequate consideration of value, purpose, God, meaning, novelty, and subjectivity.

In the case of religion, the definitions given by the respondents were apparently different. But, all of their definitions of religion fell within one of the following categories:

- Religion is a response to the transcendent by which meaning [that underlies the physical world] is provided and human lives are transformed (**Clayton, Fulljames**).
- Religion is the right pattern of knowing and worshipping God (**Bell**).

1. Golshani, Mehdi, *Can Science Dispense With Religion?* (Tehran: Institute for Humanities and Cultural Studies, 2004).

- Religion is a way of life and a philosophy of life based on humanity of man and for guiding him to the belief that the universe has a Creator and Sustainer (**Butt**).
- Religion seeks to understand and to bind us to the scheme of things in which God is preeminent (**H. Smith** and **Wintermans**).
- Religion has to do with the ultimate good of man and is concerned foremost with the relation of man and God. It is based on a divine revelation (**W. Smith**).
- Religion is a consciousness of supra-natural which shapes man's view of himself, his position in the universe and his relation with things therein (**Zaki Kirmani**).
- Religion is a system of doctrinal beliefs about Divine reality and God's creation and a system of rituals and practices, both individual and collective, which aim at the fulfillment of one's relation with God and fellow humans (**Bakar**).
- Science operates with the presumption that there are causes to things, religion with the presumption that there are meanings to things (**Rolston**).
- Religion results from the encounter with God in which God opens one's eyes for an evaluation of all personal life experience from God's perspective (**Schütz**).
- In the broadest sense religion is devotion to whatever one takes to be of ultimate importance. Less broadly speaking, religion is the cultivation of a sense of mystery that transcends the knowable world. Religion in a third sense typically means belief in a personal God (**Haught**).
- A set of beliefs, values and practices that form a worldview may be termed religion 1 and a worldview that affirms the existence of a supernatural may be termed religion 2 (**Byl**).
- Religion looks beyond the natural processes themselves to discern the ultimate meaning, purpose and significance in them (**Hurlbut**).
- Religion embraces all aspects of our relationship with the Divine. This relationship is a personal one and involves living one's life as we believe God intended us to do (**Stannard**).
- Religion is a Divine message that has been granted to help man to know God and to prepare him to face God (**Guiderdoni**).
- Religion is the Divine Guidance and as such bestows upon us two fundamental states of mind: one is the consciousness of the Divine Presence in all; the other is the moral sensitivity in our behaviors (**Acikgenc**).
- Religion, in its broadest sense, is that fundamental truth which resides at the core of one's existence and defines one's worldview (**Iqbal**).
- Religion can ask ultimate questions and receive answers about significance and value (**Albright**).

In my view, the first definition includes the others. Some scholars preferred to compare theology with science. I see no problem, because theology is concerned with the theoretical aspect of a religion and can be considered part of it.

Some scholars believed that one cannot provide a definition for science and religion that does justice to them (**Brooke**).

Compatibility of the Definitions of Science and Religion

There is an almost unanimous agreement between the respondents that there is no *genuine* conflict between the two concepts, and that is because of the following reasons:

- They are complementary aspects or layers of the same reality (**Ellis** and **Gregersen**)—science provides the mechanism, religion the meaning (**Richardson** and **Hurlbut**).
- They seek to answer different questions—scientific descriptions answer “how” questions and theological descriptions answer “why” questions (**Albright**, **Bube** and **Stanmark**).
- They are common in their search for pattern recognition (**Gregersen**).
- Science and religion are closely related and they must, if we understand them well, converge and fit together well (**Townes**).
- Science and religion express two utterly different spheres of knowledge: science belongs to the human sphere, but religion belongs to the Divine (**Acikgenc** and **Iqbal**).
- Science and religion are both concerned with the search for truth, though they pursue that quest at different levels—science investigating the processes of the world, the other asking the deeper question of the meaning and purpose behind what is going on (**Polkinghorne**).
- Science and religion appear to be in conflict, because they operate by different methodologies. But, they are no more in conflict than any two activities that take place using different approaches and tools (**Hewlett**).
- The idea of an interested, active God is difficult for many scientific thinkers to coordinate with their assumption that natural causes are sufficient to account for all events (**Haught**).
- The conflicts only arise because of erroneous viewpoint on what science and religion exactly are (**Guiderdoni**).
- Any apparent conflict is an invitation to deepen our understanding of science, or of God, or of both, in order to resolve the supposed incompatibility (**Stannard**).

Areas and Causes of Conflict between Science and Religion

The following were mentioned as the main areas or causes of conflict between science and religion:

- Most often conflict occurs where both science and religion have a vested interest, e.g. the origin of the universe (**Bakar, Giberson and Worthing**) or the origin of humankind (**Bakar and Worthing**).
- Conflict between the two arises where either one has exceeded the proper bounds of their subject (**Hodgson, Richardson, Schütz and H. Smith**), e.g. if religion interferes with science's attempt to understand the empirical world (**Sermonti**) or if science claims to yield definitive answers to ultimate questions (**H. Smith**) or if science makes judgments which are metaphysical in nature or beyond the scope of human reason (**Kamal Hassan**).
- Conflict occurs if a part of science attempts to further the materialist program, leading to an implicit or explicit attack on a religious view of the world (**Trigg**).
- There is going to be a conflict if science takes necessary conditions for sufficient conditions (**Wintermans**).
- Contrary to what is often believed by some scientists, science is based on some metaphysical assumptions (**Byl**). Thus, there will be a conflict if conflicting metaphysical visions govern science and religion (**Gregersen, Hewlett and Kalin**). It is often not scientific theories that are controversial but, rather, their philosophical interpretation (**Byl**).
- Conflict occurs if scientists dismiss religion as nothing but superstition (**Albright**).
- Confusion of science with technology by some religious leaders causes conflict (**Albright**).
- There is going to be a conflict if science seeks to explain the working of the whole universe without recourse to God (**Nasr**).
- Conflict occurs if the special nature of human persons is ignored (**Del Re and Stenmark**).
- Conflict arises if one evaluates religious matters with scientific measures (**Davari**).
- Conflict often occurs in the extrapolation, explanation and application of observational data and in ontological questions regarding the ultimate nature of reality (**Byl**).
- Invoking of non-physical reality is not acceptable to those scientists who are content with the physical aspects of creation (**Hewlett**).
- The conflict between scientific and religious interpretations arise because the boundary between causality and meaning is semipermeable (**Rolston**).
- Conflict can arise when sacred texts are interpreted in ways that deal with the latest scientific knowledge (**Brooke**).

- Conflict may occur out of the material culture of sciences, leading to a suspicion of references to spiritual values of realities (**Brooke**).

Grounds for Conflict between Science and Religion

The following were the most common grounds given for the conflict:

- (i) When either one has overstepped its proper bounds (**H. Smith, Gregersen** and **Polkinghorne**). For example:
 - Scientists have often extrapolated beyond the conclusions warranted by the empirical data (**Jacob** and **Clayton**), substituting philosophical theories for justified scientific inferences (**Clayton**).
 - Some scientists have claimed that science's empirical-critical methodology is the only valid epistemology (**Hurlbut**). An approach to resolving such conflicts would be to emphasize that the naturalism of science is simply a methodological tool that does not at all address the nature of ultimate reality (**Hurlbut**).
 - Scientists have adopted a reductionist view of science according to which science can explain everything (**Bell, Butt** and **Trigg**); in other words: erroneous deification of science (**Grib**).
 - Religious people have claimed for religious territory what is not its to claim (**Ellis**).
 - Scientists have failed to distinguish between scientific facts and scientific beliefs (**W. Smith**).
 - Scientists have been under the influence of the imperialistic behavior of rationalism in the realm of knowledge (**Guiderdoni**).
- (ii) Insofar as science and religion embody different ontological commitments as to the basic character of reality, conflicts are inescapable and should not be concealed (**Gregersen**).
- (iii) Both science and religion routinely make metaphysical assumptions, but these can be in conflict (**Albright**).
- (iv) Common areas of interest and different nature of approaches (**Katasonov**).
- (v) Rival struggles for power (**Poole**).
- (vi) There is inconsistency between the data of science and the literal interpretation of the scripture (**Del Re, Jacob, Poole** and **Stenmark**).
- (vii) Secularistic or materialistic philosophies of science (**Kamal Hassan**).
- (viii) Many people have not understood that science and religion have two different missions (**Stenmark**).
- (ix) There has been a careful orchestrated campaign to persuade us that conflict is usual and inevitable. This dates from a determined effort in the nineteenth century by Huxley and his friends to make the "conflict thesis" part of popular cultural belief (**Russell**).

The Role of Religion in the Development of Science

The majority of respondents expressed the view that religion had a positive role in the development of science in the Christian West. In their view, some of the religious ideas motivated scientific research. In other words, they provided the basic presuppositions needed for the development of science. The following are the most important:

- (i) The assumption of rational and orderly nature, thought by religion, implied that nature was amenable to scientific explanation (**Giberson** and **Gregersen** and **Haught**). Without belief in rationality, orderliness and intelligibility of nature science is impossible (**Poole**). It is certainly the case historically that the initial development of science took place largely at the hands of Jewish, Christian and Muslim believers (**Polkinghorne**).
- (ii) The discovery of the patterns of nature was a legitimate act of worship (**Giberson**), because it seemed that God could be glorified through a scientific study of nature (**Poole** and **Butt**). Scientists such as Newton and Boyle saw themselves as uncovering the laws of nature given by God as lawgiver and they saw the exercise of human reason as the exercise of a God-given faculty (**Trigg**).
- (iii) The world is open to the human mind, because God charged us to have dominion over it (**Hodgson**). The biblical concept of stewardship expresses our responsibility for the care of all things and this requires knowledge and commitment (**Bube**).
- (iv) According to religious teachings, man was created in the “image of God”, so he could understand nature, as his mind was the image of God’s mind (**McIntyre**).
- (v) The desacralization of the world by the three religions of the book facilitated the scientific approach to the world (**Gregersen**).
- (vi) The world being contingent, one cannot expect to be able to deduce its nature from some supposed set of principles; instead, one must look at the world to see which one God decided to create (**Stannard** and **Gregersen**).
- (vii) During the first millennium a similar theology of creation was influential in (the flowering of sciences) in the Islamic community (**Giberson**).
- (viii) Religion provided the initial institutional structure to the emergence of modern science through its organized monasteries and schools (**Iqbal** and **Worthing**).

Three other views were expressed concerning the rise of modern science:

- The birth of modern science which is essentially secularistic in nature was a liberation from the control of church dogmas and irrational beliefs (**Kamal Hassan**).
- The development of science in the West was less rooted in Christian theology than in the influence of printing and of religious strife (**Albright**).
- In the development of current Western science, there was no significant role of religion (**Schütz**). That the scientific revelation came so rapidly to dissociate itself from any debt to biblical theism argues that biblical theism may have served primarily a transitional role to displace inhibitory Greek views, rather than positively forming a conceptual base for modern science (**Hurlbut**).

Religious Science

Here, there was disagreement among the respondents. Some scholars denied that the concept 'religious science' makes any sense, but asserted that we can have a science compatible with religion (**H. Smith**), or a science open to religion and religious insights (**Worthing**). There were, however, others who gave a meaning to the term, but disagreed with that meaning. For example:

- Introducing religious concepts into our description of scientific mechanism (**Bube**).
- Direct Divine intervention in the categories used in scientific descriptions (**Bube**).
- A science in which appropriate religious meaning is given to the scientific theories (**Giberson**).

Some scholars thought that the application of scientific knowledge and technology should be circumscribed by what revealed religion considers proper, useful and wholesome (**al-Alwani** and **Kamal Hassan**).

Finally, there were some respondents who thought that 'religious science' makes sense and they gave their interpretation of the term. The following definition summarizes the position of many respondents (**Bell, Davari, Davis, Fulljames, Giberson, Kamal Hassan, Poole, Reich** and **Trigg**): [This is a science] that includes the metaphysics which underlies the religious view of reality (**Nasr**).

In fact, as **M. Poole** pointed out, Christian, Jewish and Muslim scientists saw science as a major activity operating within the wider perspective of a world which God has created and for which He holds us responsible.

For **Grib**, honest science is religious science; and **Townes** believes that we can have religious science in the sense that science and religion must converge if we understand them well enough, and in that case, it may be difficult to distinguish sharply between them. **Iqbal** believes that science will become religious in time, because contemporary science is squarely faced with the dilemma of its internal limitations.

Here we mention several of the views expressed concerning the way religion affects science:

- According to **Acikgenc**, there are different traditions of science, because although as humans our epistemological faculties function in the same way, the way we utilize them under our cultural and psychological pressure is different.
- **Gregersen** believes that we neither should have or could have a religious science. What does exist, however, is science pursued in a predominantly religious (e.g. Islamic or Christian) context.
- In **Clayton's** view, science can be pursued with a religious mind-set, or with religious motivations, or by religious persons as an act of obedience to the Divine.
- **Kalin** believes that it is a misnomer to speak of a 'religious science'. One can speak about the religious view of the universe and even a religious philosophy of science. It is, however, at the level of justification of scientific theories, rather than the level of discovery, that one can speak of a religious philosophy of science.
- According to **Polkinghorne**, scientifically stateable questions may be expected to receive scientifically stateable answers, and, in that sense, science does not require augmentation from religion.
- In **Richardson's** view, cultural and religious perspective has at last a background influence on the kinds of questions we ask and stance we hold toward realities we investigate. Still, science is going to be most productive when its formal activity is not identified with any particular culture or religious influence.
- **Russell** believes that there are three ways in which religion may influence the progress of science:
 - Science can owe its inspiration to a particular religion.
 - Ethical insights derived from religion may define boundaries to scientific enquiry.
 - Religion imposes restrictions on the application of science in technology.
- According to **Stenmark**, religious values—and not merely secular and atheistic ones—are allowed to influence science, but when it comes to the justification of scientific theories, there should not be such interference.

- Several scholars think that the application of scientific knowledge and technology should be circumscribed by what revealed religion considers proper, useful and wholesome (**al-Alwani, Kamal Hassan** and **Jacob**).
- One can distinguish between the context of scientific theory and motivation for understanding scientific research. One may call the science of a pious practitioner “religious” if the practice was motivated by religious concerns (**Brooke**).
- According to **Hewlett**, we can envision a science that is carried out in collaboration with religious thought.
- **Shami** believes that if science is pursued such that it seeks the long-term well-being and happiness of mankind, then it can be considered a religious science.

The Negligence of Religion by Science

It seems obvious that scientists can do a good deal of scientific work irrespective of religious considerations. Our contemporary scene is a good witness to this fact. But a large percentage of the respondents expressed the view that for one or more of the following reasons scientists cannot or should not dispense with religion:

- Science has a metaphysical basis (e.g. intelligibility and lawfulness of nature). Religion can provide science with precisely such a metaphysical basis (**Albright, Bell, Hodgson, Katasonov** and **Trigg**).
- Science cannot dispense with religion, as extra-scientific presuppositions are essential for choosing research projects, selecting theories and interpreting the results (**Byl**).
- Science is not self-interpreting. In order to understand its own results, it is inevitably constrained to draw on broader philosophical resources. Some of these metaphysical questions are religious questions: what preceded the Big Bang? etc. (**Clayton**).
- Science can dispense with religion, but scientists cannot—or at least not with something from the realm of religion to make their lives and their careers in sciences worthwhile. Scientists too must choose between good and evil (**Rolston**).
- There is no ultimate escape through sciences from human emotions, passions and needs (**Brooke**).
- Science can neglect religion, but scientists as human beings cannot, because human life encompasses much more than is adequately described by science (**Acikgenc, Bube, Guiderdoni, H. Smith** and **Stenmark**).
- For some scientists, regular religion has been replaced by a different form of religion based on science (**Davis** and **Wintermans**).
- The negligence of religion by scientists has made the science a tool of the lust for power or a mere divertissement (**Del Re**).

- Passing science to its limits necessarily raises metaphysical or philosophical issues that science cannot answer (**Ellis, Giberson, Kennedy, Koenig** and **Stoeger**).
- Applied science necessarily involves value choices that are based on ethical viewpoints that cannot themselves be based on science (**Ellis, Hubert, Kirmani, Kamal Hassan, Koenig, Plendl, Qurashi, Reich** and **Stannard**).
- It is religion that gives meaning to our scientific activities (**Acikgenc**).
- The worldview generated by modern science has obviously failed to succeed even after three hundred years (**Iqbal**).
- Science can dispense with a particular religion, but it cannot claim to be operating within a framework of “no presuppositions” (**Kalin**).
- Science does not need to appeal to religion to find answers to its own restricted set questions. The search for understanding will soon take the scientist outside the bounds of science—to the so-called “limit questions”. Religion provides the most illuminating and intellectually satisfying responses to such questions (**Polkinghorne**).
- Modern science has dispensed with religion. The question is whether or not the world can survive if this trend continues (**Bakar**).

The Separation of the Domains of Activity of Science and Religion

At first sight, it appears that one can separate the domains of activity of science and religion completely. The indifference of some successful scientists towards religious matters seems to support this view. One may say that these two are separate affairs because their subject matter and methodology is different, or that they try to answer different types of questions (e.g. science answers “how” questions and religion tries to answer “why” questions).

Careful inspection, however, does not confirm this inference. In fact, most of the respondents denied that this separation is really possible or advisable, though for different reasons. They gave illuminative reasons for denying this separation. Here, I mention a few of them:

- Religion supplies metaphysical assumptions underlying science (**Albright, Bell, Byl, Hodgson, Katasonov, Poole** and **Russell**). The ideal situation should be to have authentic metaphysical knowledge as the framework for both science and religion so that the two share common principles (**Nasr**). Science and religion are both human activities with a shared cultural field undergirded by certain assumptions about basic reality (**Gregersen**).
- Choices of scientific problems will be influenced by scientists’ theological convictions, and so are scientific descriptions (**Bube** and **Russell**).
- Separating the domains of science and religion results in intellectual anarchy and moral confusion (**Butt**).

- In the end, the study of science leads invariably back to religious questions (**Clayton**).
- The moral aspects of religion can affect decisions about the applications of science (**Poole** and **Russell**).
- The separation leads to the shallowing of science, the overestimation of scientific power and the isolation of religion from the rest of culture (**Katasonov**).
- Religion is innate to man and to do science is his basic need (**Kirmani**).
- The parts of nature that science attempts to isolate and explain are parts of a greater truth that only religion can understand, describe and convey to humans (**Koenig**).
- With the development of science, our worldview develops, and it is necessary to restate the truth of all religions in a new language (**Bell**).
- Science provides the proper setting within which religious faith must be placed (**Ellis**).
- They should complement each other in providing us with a comprehensive view of reality (**H. Smith, Fornaess** and **Grib**).
- Both domains are superimposed and are separable only for analysis, but in practice we ought to have a holistic view of everything (**Jacob**).
- They should not be confused, but they cannot be completely separated, because man has to be one as God is One (**Guiderdoni**).
- Any understanding of science or of religion by humans must use whatever human resources we have, and in this use they cannot be separated completely (**Townes**).
- The domains of religion and science cannot easily be separated. If we mean by science a way of understanding the physical nature of the universe, and by religion not rituals but a worldview by which we look at the world, then there are more points of convergence than divergence between religion and science (**Kalin**).
- In terms of methodology, the separation is desirable. Yet, the education of the aspiring scientists should be conceived so that they get a healthy dose of ethical education so as not to make out of them Faustian characters (**Mimouni**).
- In our search for both mechanism and meaning, science and religion are complementary approaches to the phenomenon of life (**Hurlbut**).
- As human activities, the two enterprises share a common ground, they are both grounded in a philosophical system that is, at some level, an attempt to understand the fundamental nature of reality (**Hewlett**).
- The two domains overlap in a number of areas (**Bakar**).
- Human activities, including scientific ones, cannot be divorced from ethical questions (**Bakar**).

- If religion is entitled to shape the direction and application of scientific research, then non-separation is not merely possible, but also a desirable state of affairs (**Stenmark**).
- For theistic confessions of faith in a God who created the physical universe, any complete or absolute separation of science from religion would amount to a tacit denial of the most basic claims of theism (**Worthing**).
- Religion must hold the key for understanding why human reason—derived from God—can grasp the nature of a world created by Him (**Trigg**).
- Religion shapes our outlook and our paradigm, and it is impossible to be totally immune against religious influence when we approach scientific research (**al-Alwani**).
- Scientists with religious, or anti-religious, convictions have found it difficult in practice to completely insulate the dominant interests in their lives, one from the other (**Brooke**).
- “Limit questions” and the need for the moral wisdom link the two domains (**Polkinghorne**).
- There is no scientific guidance of life; despite the evident progress in the sciences in today’s world, the value questions remain as acute and painful as ever (**Rolston**).
- To accomplish this feat, it is essential that there be many scientific specialists who are well-informed in religious matters and a substantial number of religious leaders who are well-educated in contemporary science (**Earley**).

Conclusion

Even though the respondents were from different disciplines, different religious affiliations and different nationalities, there seems to be agreement between them as far as the responses to these questions are concerned, and even in those cases where the responses seem different, they are complementary, rather than conflicting. This shows that dialogue between scholars of different religious affiliations and different disciplines can be very illuminative and fruitful and can lead to a good understanding among the parties involved.



Notes on Scholars Mentioned in the Article

1. **Acikgenc, Alparsalan**, Professor of the History of Philosophy, Fatih University, Istanbul, Turkey.
2. **Albright, John R.**, Emeritus Professor of Physics, Purdue University, Indiana, USA.

3. **al-Alwani, Taha Jabir**, Founding President and Imam Shāfiʿī Professor, The Graduate School of Islamic and Social Sciences, Virginia, USA.
4. **Bakar, Osman, B.**, Visiting Professor and Malaysia Chair of Islam in Southeast Asia, Center for Muslim-Christian Understanding, Georgetown University, Washington, DC, USA.
5. **Bell, Richard H.**, Senior Lecturer in Theology, The University of Nottingham, Nottingham, UK.
6. **Brooke, John H.**, The Andreas Idreos Professor of Science and Religion and Director of The Ian Ramsey Centre, The University of Oxford, UK.
7. **Bube, Richard H.**, Professor Emeritus, Department of Material Science and Electrical Engineering, Stanford University, CAUSA.
8. **Nasim, Butt**, Principal at Brondesbury College, London, UK.
9. **Byl, John**, Professor of Mathematics, Department of Mathematical Sciences, Trinity Western University, Langley, B.C., Canada.
10. **Clayton, Philip**, Ingraham Professor of Philosophy, Claremont School of Theology, CA, USA.
11. **Davari Ardakani, R.**, Professor of Philosophy, Tehran University, Tehran, Islamic Republic of Iran.
12. **Davis, Edward B.**, Professor of the History of Science, Messiah College, Grantham, PA, USA.
13. **Del Re, Giuseppe**, Professor of Theoretical Chemistry, University of Naples, Naples, Italy.
14. **Earley, Joseph E., Sr.**, Emeritus Professor of Chemistry, Georgetown University, Washington, DC, USA.
15. **Ellis, George F. R.**, Professor of Applied Mathematics, University of Cape Town, South Africa.
16. **Fornaess, John E.**, Professor of Mathematics, University of Michigan, Ann Arbor, USA.
17. **Fulljames, Peter**, Honorary Lecturer, University of Birmingham, UK.
18. **Giberson, Karl W.**, Professor of Physics, Eastern Nazarene College, Quincy, MA, USA.
19. **Gregersen, Niels H.**, Professor of Science and Theology, Department of Systematic Theology, University of Aarhus, Denmark.
20. **Grib, Andrei**, Chief of A.A. Friedman Laboratory of Theoretical Physics and Head of Department of Mathematics, St. Petersburg University EF, St. Petersburg, Russia.
21. **Guiderdoni, Bruno**, Director of Research at CNRS, Paris, France.
22. **Hassan, M. Kamal**, Rector, International Islamic University of Malaysia, Kuala Lumpur, Malaysia.
23. **Haught, John F.**, Distinguished Professor of Theology, Georgetown University, Washington, DC, USA.
24. **Hewlett, Martin J.**, Professor Emeritus, Department of Molecular and Cellular Biology, University of Arizona, Tuscon, Arizona, USA.

25. **Hodgson, Peter E.**, Head of the Nuclear Physics Theoretical Group at the Nuclear Physics Laboratory of the University of Oxford, UK.
26. **Hubert, J. Z.**, Associate Professor of Physics, Department of Structural Research, The Institute of Nuclear Physics, Polish Academy of Sciences, Crakow, Poland.
27. **Hurlbut, William B.**, Consulting Professor in Human Biology, Stanford University, CA, USA.
28. **Iqbal, Muzaffar**, President, Center for Islam and Science, Sherwood Park, AB, Canada.
29. **Jacob, Teuku**, Emeritus Professor of Paleoanthropology, Gajah Mada University, Yogyakarta, Indonesia.
30. **Kalin, Ibrahim**, Assistant Professor of Islamic Studies, College of the Holy Cross, Mass., USA.
31. **Katsonov, Vladimir**, Dean of Philosophical Faculty of the University of Russian Academy of Sciences, Moscow, Russia.
32. **Kennedy, Terence G.**, Professor at the Alphonsian Academy, Rome, Italy.
33. **Kirmani, Mahmoud Zaki**, Honorary Secretary of the Muslim Association for the Advancement of Science, Aligarh, India.
34. **Koenig, Harold G.**, Professor of Psychiatry and Behavioral Sciences and Associate Professor of Medicine, Duke University Medical Center, Durham, NC, USA.
35. **McIntyre, John A.**, Professor of Physics, Texas A & M University, College Station, Texas, USA.
36. **Mimouni, Jamal**, Professor of Physics, Constantine University, Constantine, Algeria.
37. **Murphy, George L.**, Adjunct Faculty Member, Trinity Lutheran Seminary, Columbus, OH, USA.
38. **Nasr, Seyyed Hossein**, Professor of Islamic Studies, George Washington University, Washington, DC, USA.
39. **Plendl, Hans S.**, Emeritus Professor of Physics, Florida State University, Tallahassee, USA.
40. **Polkinghorne, J.**, Former Professor of Mathematical Physics, University of Cambridge, Fellow of the Royal Society and Fellow (and former President) Queen's College, Cambridge University, UK.
41. **Poole, Michael W.**, Visiting Research Fellow in Science and Religion, Department of Education and Professional Studies, King's College, London, UK.
42. **Qurashi, Mazhar M.**, Emeritus Professor of Physics, Quaid-e-Azam University, Islamabad, Pakistan.
43. **Reich, Karl H.**, Senior Research Fellow, School of Education, University of Fribourg, Fribourg, Switzerland.
44. **Richardson, Mark**, Professor of Theology, General Theological Seminary, New York, USA.

45. **Rolston, Holmes, III**, University Distinguished Professor, Department of Philosophy, Colorado State University, Fort Collins, CO, USA .
46. **Russell, C. A.**, Emeritus Professor of History of Science and Technology, Open University and Affiliated Research Scholar, University of Cambridge, UK.
47. **Schütz, Gunter M.**, Senior Scientists at Research Center Jülich, Jülich, Germany.
48. **Sermonti, Giuseppe**, Professor of Genetics, University of Palermo and Perugia, Italy.
49. **Shami, Misbah-ud-Din**, Former Professor of Chemistry, Quaid-e-Azam University, Islamabad, Pakistan and Vice-President, Islamic Academy of Sciences, Amman, Jordan.
50. **Smith, Houston**, Thomas J. Watson Professor of Religion and Distinguished Adjunct Professor of Philosophy, Emeritus, Syracuse University, Syracuse, NY, USA.
51. **Smith, Wolfgang**, Professor of Mathematics, Emeritus, Oregon State University, Corvallis, OR, USA .
52. **Stannard, Russell**, Professor of Physics, Open University, Milton Keynes, UK.
53. **Stenmark, Mikael**, Professor of Philosophy of Religion, Uppsala University, Uppsala, Sweden.
54. **Stoeger, William R.**, Adjunct Associate Professor of Astronomy, University of Arizona, Tucson, AZ, USA.
55. **Townes, Charles**, Emeritus Professor of Physics, University of California at Berkeley, USA.
56. **Trigg, R.**, Professor of Philosophy, University of Warrick, Coventry, UK.
57. **Wintermans, J. F. G. M.**, Emeritus Professor of Botany, Catholic University of Nijmegen, Nijmegen, Netherlands.
58. **Worthing, Mark W.**, Lecturer in Theology and Ethics, Luther Seminary, Adelaide, Australia.