

INTERVIEW

THE MEANING, SCOPE, AND FUTURE OF ISLAMIC SCIENCES

Seyyed Hossein Nasr in Conversation with Muzaffar Iqbal

This wide ranging conversation between Seyyed Hossein Nasr and Muzaffar Iqbal brings into sharp relief certain fundamental aspects of two key terms—‘Islamic Science’ and ‘Islamic Sciences’—and then moves on to discuss the nature and scope of Islamic sciences from the perspective of Islamic intellectual tradition.

Keywords: Islamic Science; Islamic Sciences; Approaches to the Study of Islam in Academia; Historical and contemporary approaches to study of Islam; Islamic Intellectual Tradition.

Iqbal: *Aslamu ‘alaykum.*

Nasr: *Wa ‘alaykum as-salām* Dr. Iqbal, how are you?

Iqbal: *Al-ḥamdu Lillah.* Finally, the spring is here, and birds are singing.

Nasr: I always think of you sitting up there in the cold, surrounded by vast white land...

Iqbal: Yes, most of the time, it is like that, but now trees have new leaves and it is simply amazing to watch this metamorphosis.

Nasr: *Al-ḥamdu Lillah.* You wanted to talk about Islamic Sciences, I am at your service; next hour is yours.

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Iqbal: *Jazāk Allah*. What I had in mind is a range of issues related to Islamic Sciences. As you know, we have changed the name of the journal from *Islam & Science* to *Islamic Sciences* after due consultation with the Advisory Board and I wanted to discuss with you the scope of the Islamic sciences, both historically and their prospects today, in the traditional Muslim lands and beyond. The issues I hope we can address in this conversation range from the definition of Islamic science to the trajectory of this discipline in the Western academy, but we can let the conversation flow on its own. Perhaps you might begin by providing some definitions of these terms.

Nasr: The question of what “Islamic science” means, when we are using the English language and trying at the same time to remain faithful to the Islamic understanding of the subject, is somewhat problematic and difficult because the word “science” in English does not have the same connotations as the word *‘ilm* in Arabic and some other Islamic languages. Even within the European languages, English usage of the word is particularly limited. It is spelled the same as it is in French, but the French *la science* (Latin *scientia*) has much broader meanings. For instance, in America if you ask someone, “What are you studying at college,” and the person says, “I am studying science,” one understands by this physics, chemistry, biology, or other natural sciences. But if they are studying at the Sorbonne or the University of Paris, and respond using the word *la science*, that could also mean moral sciences—a term first used by Hume in his *Enquiry Concerning the Principles of Morals*, and referring to the systematic study of human nature and relationships. The wider French usage has been gradually percolating into English and now we can also speak of “human sciences” in English—the equivalent of the French *les sciences humaines*—as referring to those branches of knowledge that deal with the human person. Philosophically, the broadest definition of science is organized knowledge.

Iqbal: And this is how the term *‘ilm* has been traditionally understood, so that when we say *‘ulūm al-Qur’ān*, we mean the systematic and organized field of study of the Qur’ān—the entire field dealing with all branches of knowledge about the Qur’ān, whether *tafsīr* (commentary), *lughā* (language), *balāgha* (rhetoric), or any other science. Likewise for terms such as *‘ulūm al-Ḥadīth* and *‘ulūm al-fiqh*.

Nasr: Yes, indeed, as I have written in various books, in Islam, all branches of knowledge are interconnected and none is divorced from religion; they are organized as are roots (*uṣūl*) and branches (*furū‘*). Thus, in traditional Islamic civilization, even if you studied a book of medicine, like the *Qānūn* of Ibn Sīnā, the book starts by mentioning the Name of God and goes on to the praise of the Prophet—upon him blessings and peace—before anything else. That is,

we try to relate the subject under study to the Creator, to God Himself. The same is true for mathematics, astronomy, and so on. Muslim scholars of the past, who were some of the greatest scientists in human history, considered the root of what they were studying to be the Divine Reality. This truth and the consequent interrelation of the branches of the tree of knowledge are something that we have now forgotten. And therefore the sclerosis that has taken place in the modern scientific world has reduced the human mind to something like a set of drawers: in one drawer you put socks, another is for shirts, but there is no necessary relationship of one to the other. Like students in our modern institutions, who may take a course on biology from 9 to 10, the next hour a course on the history of South America, the next hour a linguistics class...but there is no intellectual relationship of these with each other. It is all segmented. When students are sitting in a class and discussing Shakespeare, it has nothing to do with the math class that they are going to take the next hour. This segmentation in the lack of common principles is what characterizes modern education.

Islamic education was exactly the opposite of this. It was considered a type of intellectual sin to separate knowledge into compartments, although each branch of knowledge had its own methodology which was strictly adhered to. That is, the methodology for the study of logic was not the same as that of grammar, and you would not mix the two together. Or if you were studying chemistry, you could not apply methods of the study of Sufism to it, and vice versa. But the methods themselves were rooted in a worldview and hierarchy of knowing that related them together. The universal figures we have in Islamic civilization, people such as al-Fārābī, Ibn Sīnā, and Omar Khayyām, were all polymaths. These people were not only many-sided geniuses; they were also totally integrated personalities who had a wholesome view of knowledge—all based on *tawḥīd*, Unity, which implies not only *tawḥīd* of the Divine Being, but also the *tawḥīd* of His creation, existentially, that is the relation of creatures to each other, as well as *tawḥīd* of knowledge. I have alluded to this matter in my *Knowledge and the Sacred* [SUNY Press, 1989], which is a heavy metaphysical book meant for those who have studied such matters for some time.

So, on the one hand, all of the different intellectual rational and transmitted disciplines in Islamic civilization are to be designated by the term “Islamic sciences”, whether they are Qur’ānic commentary, grammar, or logic; and on the other hand, one has to differentiate the term from “Islamic science”, which usually refers specifically to the natural and mathematical sciences. In my own writings, depending on the context, I have used both terms, plural and singular. When I write “Islamic science”, let us say in my book *Science and Civilization in Islam* [Harvard University Press, 1968], I mean the natural and mathematical sciences, not the religious or linguistic and literary sciences.

However, sometimes, when we talk about Islamic education, I have written “Islamic sciences” in the sense of organized knowledge. Science ultimately means organized knowledge, and “Islamic sciences” are those branches of knowledge that have been cultivated in Islamic civilization according to the principles of Islamic revelation. At least that is my (and other traditional scholars’) understanding of it. Now, it is very important for Muslims who are engaging this discourse and using the English language to be aware that even in the English-speaking world, during the twentieth century, there have been debates among a number of philosophers of science as to what exactly is meant by “science.” This was prominent when I was at Harvard some fifty years ago, for instance. Some Western philosophers of science say that the only possible definition of science is organized knowledge. Others hold that “science” is what a particular culture says it is. I have also heard it from leading Western authorities that the only definition of science is, “what scientists do.” All of these nuances, these different senses and meanings of the word “science,” must be taken into consideration. But there is one other issue I want to add to this topic.

There are some people who have been very sensitive to use of the term “Islamic science”. These are usually secularist scholars of the history of science, some of them with Muslim names, who are influenced by the Western understanding of science as being a completely autonomous discipline—whereas in contrast, before modern times, the science of every civilization was closely related to the intellectual perspective, to the presiding Idea you might say, to the worldview of that civilization. Islamic science is no mere exception to this principle; it is one of its best examples. For one of the fundamental aspects of Islam (from a metaphysical point of view) is integration. That is why, when it comes to Islam, we laugh when we hear about separation between Church and State, between the secular and the Sacred. The word “secular” did not even exist in Arabic. We had to force ourselves to invent new words such as “*‘ālamāniyya*,” which did not exist in classical Arabic because the very idea of the secular as a category of reality had no legitimacy in the Islamic worldview. It is exactly the same in your own mother tongue of Urdu and mine, Persian. One has to pay attention to the way these words come about, the reasons why they are invented. The reason there was no domain corresponding to the term “secular” is because the integrating power of Islam, as the way of looking at reality and living according to that perspective, is a religion in the broad sense, with a specific worldview, a religion not just limited to worship but in the vast sense of *dīn*. It is the integrative power of Islam that is operative behind the integration of knowledge. When I first started to use the term “Islamic science”, many people criticized me for it. They still do. They do not understand why this is not simply a chauvinistic term used by me as a

Muslim for my ideological ends; it has a very important intellectual root in the nature of things.

When I began working in this field over fifty years ago, I became a student of George Sarton at Harvard. I went to study with him because he was the great authority in the West on Islamic science, but he used the word “Arabic science”, which I recoiled against for several reasons. First of all, because it was (as it still is) being used by modern Arab nationalists, and you know that story and the ideological reasons behind it. I do not want to get into that matter here. Second, it had no equivalent in Islam itself. Employing the phrase *al-‘ulūm al-‘arabiyya* in Arabic would probably indicate to a listener that we are talking about the Arabic language. I mean, before modern times you would not call a mathematical treatise by Omar Khayyam *al-riyāḍiyyāt al-‘arabiyya*. These terms are artificial—these are modern inventions. Secondly, the term Arabic science was a heritage of the West in medieval times and then it was understandable because the West, in medieval times, used these languages not as a sign of a regional worldview to a particular ethnicity but simply as languages used in scientific discourse. And that is why in the Middle Ages and even later, Western science was also called “Latin science”. It had nothing to do with nationality or ethnicity. If you were an Englishman or a Scotsman, let us say a Roger Bacon, you were called a Latin scientist or Latin philosopher, and that was understandable in the context in the Middle Ages. But today no Englishman would accept being called a Latin philosopher or scientist: now these terms have other meanings than they did during the Middle Ages. This usage also draws on the medieval heritage in another sense, for the West even then called all things Islamic “Arabic,” whether it was science or philosophy or anything else, because it had no access to Persia and other non-Arab Islamic lands. (Persian texts traveled farther east, not westward, and so there is a historical logic to the medieval European use of the term “Arabic science” (*scientia arabes*).

The most important reason for using the term “Islamic” rather than “Arabic” science today is that the latter detaches the meaning, the framework, the worldview of the sciences from Islam itself, and that is totally fallacious. Ibn Sīnā and al-Bīrūnī functioned in an Islamic universe that they understood in terms of the Qur’ānic revelation. Of course there were many variations of this, many interpretations, but they all believed that the world had a Creator, that it had an origin, that reality was not limited only to the material realm, and so on. Every Muslim scientist, whether Sunnī or Shī‘ite, Shāfi‘ī or Ḥanafī, or following any other school, whether living in Morocco or the Punjab, all shared the broad worldview which emerges from the Qur’ānic revelation. My humble task for the last fifty years has been to show that the science cultivated by Muslims is *Islamic* in a significant sense and that it is related to Islamic

revelation. Many modern authors are very much against this very category of “Islamic science.” Most secularists do not understand what is meant by this. Many of them have never really studied the broader Islamic sciences from the Islamic point of view and so do not understand their integration with Islamic science. They are therefore very uncomfortable with the term.

Iqbal: Now to move the discussion slightly towards what we traditionally understand by the term “*al-‘ulūm al-islamiyya*” (Islamic sciences), referring to all branches of knowledge—*tafsīr*, *lughā*, *Ḥadīth*, *fiqh*, botany, chemistry, trigonometry, in short, all sciences, rooted in and emerging from the Islamic revelation, whether as foundational or as branches, all collectively called “Islamic sciences” in English: where do we stand today, in reference to this integrated view of knowledge and as far as their study is concerned?

Nasr: That is a big question! Let me first repeat what I have said elsewhere—I do not recall exactly where, because when you are at the end of your life as I am and have written a large number of articles, you do not always remember what you have written where—about the distinct use of these two terms: In English, in the general academic world, when we say “Islamic science” in the singular, people think of the natural and mathematical sciences. But “Islamic sciences” in the plural can have two meanings. Either different branches of the natural or mathematical sciences, such as trigonometry, geometry, algebra, mathematics, physics, etc., or it can mean all of the Islamic sciences, both the intellectual sciences (*al-‘ulūm al-‘aqliyya*) and the transmitted sciences (*al-‘ulūm al-naqliyya*). Already over fifty years ago, when I wrote *Science and Civilization in Islam* [Harvard University Press, 1968] in my twenties, I alluded to this at the beginning of that book. Some of the people who have worked with me, especially Osman Bakr, who did a PhD thesis with me on the classification of sciences in Islam, have also written about this issue. I think that, at the present moment in the history of the Muslim world and in fact of scholarship globally, it is very important to bring out the second meaning, that is, the integrated sense referring to the natural sciences but also the transmitted sciences, the linguistic sciences (*‘ilm al-lughā*), the Qur’ānic sciences (*‘ilm al-tafsīr*), the *Ḥadīth* sciences (*‘ilm al-Ḥadīth*). That is, the Islamic use of the term as you would understand it in Arabic has to find a place for itself in the English language. It is very important to note that Muslims classified sciences in order to relate them to each other and to the central trunk of the tree of knowledge, which for us has its roots in the Qur’ān. Classification was an aid not only for learning but also to relate various disciplines.

Iqbal: There has been a certain Oriental legacy that dichotomizes these disciplines, as in the well-known theory of Ignác Goldziher, the “Islamic Orthodoxy against natural sciences” thesis...

Nasr: Goldziher made a great mistake here—and him the dean of Islamic studies in the West!

Iqbal: Yes, very influential.

Nasr: Goldziher, the Hungarian scholar, was a great scholar, but harbored a false notion of an Islamic orthodoxy which was against science. This is not true. Not true, at all. Yes, there were certain theological and legal schools which wrote against the philosophers and some scientists, but there were others who were both scientists and religious scholars. It is like saying that if somebody wrote a treatise against Ibn Taymiyya, therefore, Islam was “against” Ibn Taymiyya. This yields a model of Islamic civilization imposed upon the Islamic world by Western Orientalism, and I don’t believe it for one minute. The fact that after, let’s say, the twelfth century there was not too much scientific activity in Egypt or North Africa doesn’t have to do with dominance of this Islamic orthodoxy, it has to do with other factors—because shortly thereafter you have the Islamic revival of mathematics and astronomy, the Marāgha school, Naṣīr al-Dīn al-Ṭūsī, and others. Nonetheless, what Goldziher did with his theory dovetails well into the Western historiography of Islamic science, which considers Islamic science to have ended mysteriously in the thirteenth century when the intellectual contact of the West with the Islamic world came more or less to an end. (These accounts usually include a note on the later Ibn Khaldūn as an exception.) This means the entire intellectual tradition of Islamic world after the thirteenth century is totally neglected in the West, that is, a full seven hundred years! Totally neglected, both its philosophy and science. I am not saying that figures such as al-Bīrūnī were running in the streets of Lahore in the seventeenth century, of course.

But no civilization necessarily spends all of its intellectual energy on one discipline or field all the time. And we have no guarantee—as I have said many times—that the West is going to be pursuing the natural sciences as its primary concern as it is doing now one hundred years down the road. For seven or eight centuries—the longest span of all global scientific traditions—Islamic civilization was leading the world in the natural and mathematical sciences as well as in many other branches of knowledge. The sheer volume of works produced by Muslims in various sciences is staggering, and a lot of manuscripts have not been studied yet. Just in the field of philosophy, which is very closely aligned to science and the field of logic, I discovered so many manuscripts in India in 1962, that had never been studied by modern scholars. There are more than three thousand manuscripts of *al-‘ulūm al-‘aqliyya* in India alone that are yet to be tapped. This is because even the little bit of what we Muslims have studied of our own tradition was based to a large extent on what Western scholars had said about it. Unfortunately, if you were at the

University of Punjab or Tehran University, where I was professor and dean for so many years, again our scholarly worlds were disconnected—you were not interested in what was going on in southern Iraq, where people built those remarkable bridges, mosques, and public works, nor in the science behind them, because you were told by Western scholars that Islamic science had already died in the thirteenth century. So, the task ahead of us is immense: to study our whole tradition and to study it from the Islamic point of view; to reformulate the whole schema according to which Islamic science developed, and the interrelation of these sciences and the cosmology behind them; and the question of why some disciplines were discontinued in one place but flourished in another. For example, Ibn Sīnā's philosophy was discontinued at al-Azhar during the Mamlūk period, but not his book of medicine, *al-Qānūn*, though the two are interrelated. Look at all the medicine that was being practiced and written about in Damascus. Those people were *ḥakīms*; they were scientists, but they also knew Islamic philosophy. We still really do not have a good history of Islamic science, though things are changing. Your own work helped a great deal in opening up this perspective; now there are many scholars of a new generation who are ready to deal with these matters more seriously.

Iqbal: Let us focus on the current status of Islamic sciences within *dār al-Islām*. During the pre-modern period, scholars who studied *tafsīr*, for instance, also studied *Hadīth*, *fiqh*, *ʿilm al-rijāl*, and many of them also studied medicine, philosophy, and other branches of knowledge. There was a unification of Islamic sciences. However, with the impact of Westernization and especially during the colonial era, that tradition of learning suffered a great deal such that we now have Hodjas and Mullas who have little say in the public affairs of state, while the entire social, political, and economic scene is dominated by men and women who have been formed by the institutions of modern education. Thus, even within the traditional lands of Islam (*dār al-Islām*), the dichotomy between the religious and so-called worldly sciences reigns supreme.

Nasr: This is a very important issue, and I am glad for the opportunity to address it. Let me begin by saying that there are several phases of the process which has led us to where we are. First of all, for reasons which no historian has been able to satisfactorily explain, in many parts of the Islamic world (though, importantly, not all) the curriculum of the *madrasahs* gradually narrowed at around the sixteenth to the seventeenth century CE (that is, the ninth Islamic century). This is not the nineteenth or twentieth century, but even before even the advent of colonialism. If you look at the curriculum of the courses taught at al-Azhar University at the time of the Fatimids and then the Ayyubids and then the Mamluks, you will see what happened. The only intellectual science that endured in the curriculum was logic, while the other philosophical and scientific disciplines were taught less. We have to study why this happened.

And it was in this already-narrowed gauge of education into which modernism entered. Each of these three elements is significant and deserves further study; the traditional curriculum and education; the gradual narrowing of its courses and topics; and the entrance of the Western educational system. Alongside the middle phase, parallel with it though earlier in time, is the Mongol invasion, which devastated many universities and intellectual centers. Sir Hamilton Gibb used to say that if the Mongol invasion had taken place in Europe, there would no longer be a European civilization. It is remarkable that Islam had the resilience to rise from that. Even after the Mongol invasion, in addition to the *madrassas*, we had other centers at which various sciences were taught, observatories where astronomy was pursued, private circles of study that taught philosophy and mathematics. These survived until my own days in Iran—I have direct, personal experience of this. So, alongside the *madrassa* curriculum we also have to consider these less formal circles of knowledge transmission.

Iqbal: Having understood the term “Islamic sciences” in its proper sense and considering the historical situation, the next step is to talk about operationalization of this kind of knowledge. I mean, all well and good to pursue such historical research or lay out its theoretical integration, but what are the ground realities? A few decades ago, you had prepared a blue print for Hakim Mohammad Said for starting an institution where an integrated approach to knowledge could be the basic principle. That institute never came into existence. Then, there have been efforts in Iran to integrate and combine what is taught in the university with that what is taught in the traditional seminaries (the *Hawzas*), but there is still no real school or institute where this approach is being practiced.

Nasr: The question that you pose is extremely important and I have, in different places, alluded to what I consider to be the solution. This was actually what led to the establishment of Islamic universities in the 1970s, but unfortunately that did not come to be the right solution. Sayed Ali Ashraf—God bless his soul—myself, and certain others attempted to create new Islamic institutions based on the philosophy of education derived from the holistic Islamic worldview. A great deal of effort was made to bring together Muslim intellectuals and we had the great conference on Islamic education in Makka, where I gave a keynote lecture and laid out a plan to achieve the task; but we did not realize then that the people who were going to actually create these institutions did not share our point of view. So what we ended up with was Islamic universities, such as those at Kuala Lumpur and Islamabad, where they teach *Shari‘a* and other “Islamic sciences,” but have a totally secular approach to other forms of knowledge. If they teach chemistry, they teach it as they would at the University of Punjab, for instance. They do not understand that Islamic principles should apply to every form of science.

Now, to come back to your question about what we should do practically: I said this fifty years ago and I am still saying it—as in the famous Persian proverb, *sang-i buzurg ‘alāmat-i nazadanast*, when you pick up a big stone, it is a sign you are going to throw it. That is, this idea of having a grandiose institution, let us say a university with 50,000 students based on the Islamic view of knowledge, is not going to work at the present stage. Every important intellectual transformation in human history has begun with a few people. Even the modern scientific revolution, which changed the face of Western civilization and then later all other civilizations, likewise began with the achievements of a few. It wasn't that everyone suddenly changed their worldview. If you walked in the streets of Rome or Florence itself, where Galileo lived, most of the people still functioned within the worldview of pre-Galilean physics and astronomy. Then the change started to spread.

Now, that is what we have to do in the Islamic world today. The one thing that has been accomplished since I first wrote on these subjects, back in the 1950s when I was just finishing my PhD, is that first of all a great deal of debate has taken place with various groups (like Ijmālis); these debates, though not all equal in quality, were nevertheless important, because they eliminated certain false premises. The second important thing is that the philosophical vision for a unified Islamic educational system and sciences has been more or less fully articulated by various intellectuals, not more than fifteen or twenty in number. When they began this intervention there was barely anything written on these topics in this way, but now we have a solid core of texts. Third, there are enough people in the world today, who have accepted the idea of authentic Islamic sciences, to start one or two small centers (no more than that) at which these issues are both studied and taught to others, and let this be used as seed for the next season. If you're hungry, and you have just one sack of wheat, but you have to feed a whole village, rather than converting the entire quantity of wheat at hand into loaves of bread, it is better to sustain your hunger and keep some to plant so that the next harvest provides you more than enough to meet the needs of the whole village. This is what we need to do. That is what you are doing and I am doing—we do not have the financial and political power or even the intellectual means to institutionalize this vision on a vast scale, but we have to state our perspective. We have to state realities and train the students we can.

However, there are some countries, including Iran, where there are some people who are very influential and who understand these matters. The program that I tried to develop when I was president at what is now called Sharif University, which is Iran's leading scientific institution, to integrate modern science with the Islamic worldview, to study the philosophy of science from the Islamic and not the Western point of view, was exactly this kind of

effort, and has had some success. We need to fortify and multiply these kinds of efforts. Concretely, there needs to be a center, either somewhere in the West or in the Islamic world, where a small batch of students is taught and research is conducted, specifically toward this vision. This, I think, is the only possibility for revitalizing Islamic sciences. Perhaps we could establish one such place in the West and another in the Islamic world; just two such institutes where serious work could be done would do wonders.

At one time, I had proposed the same thing for Islamic art, given the imperative to revive the philosophy of Islamic art in order to revive Islamic art and architecture. Then the Prince of Wales Institute of Islamic Art was established in London, which is exactly what was needed. A number of very good Muslim students in architecture and design attended this institute—one of whom, Khalid Azzam, from the famous Egyptian family of that name, is now the head of that institution. And then the Jordanian authorities of the highest level became interested, and established a wonderful school of Islamic art which is now functioning in Amman under the direction of Minwar al-Maheid, who has an excellent grasp of the principles of Islamic art and architecture. So we have an example of success and I am very pleased that they are now creating one like it in Indonesia.

But, back to Islamic sciences: I want to say that you can play a very important role in this endeavor. I am at a stage in my life when I am about to meet my Creator. I cannot undertake any more administrative duties or start establishing institutions, as I have done in the past. Now, you are younger than I am and it is your turn, but I am at your service and will help you in any way that I can, God willing.

Iqbal: Operationalizing this vision hinges upon the availability of material resources. Traditionally, Islamic sciences have always been supported by public funds through *awqāf* or sometimes individual patronage of kings, *wazīrs*, *‘ulamā’*, and merchants. But today, that glorious institution is in ruins. We have individuals with large amounts of money, who are mostly interested in construction of tall buildings and plazas rather than funding serious scholarship. When we talk of establishing even a single institute, we immediately run into the question of funding—I do not see any real hope of this happening in the near future, even though just one or two individuals could fund it. People who control public money—mostly oil money—do not seem interested in the revival of Islamic sciences. So where is the hope for such an institute to come into existence, either in the West or in the Islamic lands?

Nasr: Your analysis of the economic dimension of any educational enterprise in the Islamic world is completely correct. I will tell you where the hope is—but as a prelude, one has to underscore, as you did, that educational institutions throughout Islamic history were generally supported by endowments, like

the Nizāmiyya at which al-Ghazālī taught. All of these endowments were funded by individuals, whether Kings and Wazirs or rich merchants. Many such institutions abide even now, like the Wazir Khan Mosque and *madrassa* in your own city, Lahore. Now, several things have been changed from the traditional situation. First of all, institutional *awqāf* have been taken away from the *‘ulama*; this major Islamic institution has been to some extent secularized. “Ministries of *Awqāf*” were created, and the endowments came under the ambit of governments in Egypt, Pakistan, Turkey, Iran, and many other countries. Today, the people who usually endow the *waqf* are generally interested in funding places of worship, rather than centers necessarily involving intellectual activity. We are thus faced with a dilemma in which the governments that took over the *awqāf* are, by and large, secular, and so think primarily of modern Western science and technology if they think of intellectual activity. There are exceptions—for instance, today is the first of Khurdād, the third month in the Persian calendar; when there are big celebrations for Mulla Ṣadra in Iran, some with government funding. Second, and this is the main problem, most of the wealthy in the Muslim world today are *nouveau riche*; they lack rooting in Islamic culture and intellectual tradition, unlike the aristocracy of old. Of course, there is a great deal of fluidity in Islamic societies, but the new merchant class is more inclined toward Western science and technology, imports from Germany and the United States, and the like; you know what I am talking about. These people do not breathe in the same cultural matrix as did their predecessors a century or two ago. Third, you have new types of institutions, such as universities, which have their own budgets and funding, whether government-controlled or private, and today (unlike the Nizāmiyya at which al-Ghazālī taught) are not based on a *waqf*. Within this context, as you said, what is to be done? Where is the hope?

Let me give you an example. I told you about the Prince of Wales Institute in London for the Revival of Traditional Islamic Art, also touching on the sciences and traditional geometry and so forth, created through the patronage of Prince Charles. It has been doing very good work over the last two decades, and a similar institute—unique in the Muslim world—has been established in Amman. Now, the question is, how did this happen? The first cousin of the King of Jordan, Prince Ghazi bin Muhammad—a close friend of mine, a remarkable man among Arab princes, a Princeton and Oxford-educated doctor, who writes very well and thoroughly understands Islamic tradition as a whole (especially its artistic tradition)—was there on the ground, you might say. This is a good lesson for us, and is the only thing we can do now, that is, search for one or two effective patrons. I have no hope that, for instance, a newly elected Egyptian president will decide to establish a new university for traditional sciences. That is not going to happen. But this second possibility is

always there. I shall give you a second example: the late King of Morocco, King Hasan, who was very much a modernist—the way he dressed before becoming king was very much like a French gentleman, his ties cost hundreds of dollars, and I knew him well personally when he was still crown prince—but who also had a great love for Islamic art and architecture. This was a kind of spiritual love. He did more than any Muslim ruler in the twentieth century for the revival of Islamic art. It is unbelievable what he did in Morocco: he established a school for the revival of Islamic architecture, design, geometry, Arabic, and other traditional sciences, all amounting to a really remarkable contribution to Islamic artistic (and therefore intellectual) tradition. He was neither a philosopher nor a mathematician; he did not understand Islamic sciences the way you and I do, but the application of those sciences to the domain of arts was of interest to him. So we have two examples from the Arab world: one in Jordan, one in Morocco. Both of them appear as kind of accidents: nobody educated King Hasan, nor Prince Ghazi, to be interested in these matters. We must therefore not lose hope and pray that such a thing may happen for the Islamic sciences.

Among the billion and a half Muslims, there are probably several million who are fairly well off financially. Surely five or ten such people can undertake this task for the broader Islamic sciences what some people did for Islamic art and architecture. I know, for example, that there is a new class of very wealthy businessmen in Turkey; they are very pious, not like the *nouveau riche* I mentioned before. Many of them sponsor books, publishing houses, and other intellectual activities; they are interested in universities, and it is not difficult to imagine that some of them will see value in the idea of funding an institute of the kind we have mentioned. You only need one or two such people with whom you can work to establish a small center for the revival of traditional Islamic sciences—a center where one would teach both the *naqlī* and the *‘aqlī* sciences as an integrated vision.

Another country with such prospects is Indonesia, where there is a lot of interest in Islamic sciences, even among the wealthy. They already have an institute of perennial studies in Jakarta, which is a very interesting development, especially because one could not even imagine it a few decades ago. With forty or fifty gifted students, the entire intellectual landscape can be changed. The other countries where one might picture such possibilities include Turkey, Iran, Indonesia, and also Malaysia; unfortunately, I cannot name any country in the Arab world, despite their massive libraries and manuscripts, which are today the site of the Arab Spring and the construction of tall buildings, as you so perceptively wrote of Makka in the previous issue of your journal... The political culture and situation are not currently amenable to the kind of intellectual activity we have in mind. Nor did I mention Pakistan—your

country of birth—despite its great potential, because, unfortunately, there are a lot of difficulties there right now. One may also mention places like Bosnia, where there are strong intellectuals very much along our line of thinking, but they are somewhat disconnected from the rest of the Muslim world.

Iqbal: Good. If there is a possibility of one place, one center, that is all one needs at this stage, to begin the work, and once people see the fruit...

Nasr: That is right. And then there is a question of quality, and this brings me back to a point which I had had mentioned before: we need to remain very small at the beginning; one cannot mass-produce good scholars and thinkers.

Iqbal: Indeed! On another note, but speaking of the influence of a small number of people, there is a long history of the study of Islam in the West. It has gone through several stages. At present, we have a mixture of neo-Orientalism and academic discourse as well as a new generation of Muslims entering the field. Some of these are your students; others have studied with other scholars, and they are now taking up positions. Now, the question is, what kind of discourse will this new generation forge in the academy? What I mean is the following: when one reads your work, one immediately recognizes the fragrance of *īmān*. You write in an academic style, but you do not sprinkle your text with the academic jargon or the hesitancy one finds so often (“maybe”, “perhaps”, “it is plausible”, and so forth). Instead, one knows immediately that this text comes from the pen of one firmly rooted in Islamic tradition. Let me ask parenthetically something I have always wanted to ask: given that the academy has its own dictates, how did you manage to maintain your uncompromising stand, your own unique style? I was fascinated by this when I first read your works in the 1970s. More broadly, though, this academic discourse on Islam has a history of its own; and Muslim scholars who arrived in the West from the former colonies came with massive colonial baggage... Most of them yielded to the dictates of the academy and wrote in the same vein as their non-Muslim mentors and teachers. But now, we have a new generation, mostly children who grew up on the West, entering the academy. What advice can you give them to forge a genuine and authentic discourse on Islam?

Nasr: This is a very important question; let me respond as best as I can. Although I don't want to speak about myself, I am unfortunately involved in this, so I have to. When I shifted from the sciences to the humanities, from studying physics and mathematics at MIT to the field of Islamic sciences and philosophy at Harvard, I studied with several major Western scholars, including the greatest classical Orientalist of the English language, Sir Hamilton Gibb, who had great appreciation for our religion. At that time, there were three kinds of writings on Islam: first, texts written by non-Muslim Westerners, who studied Islam from either the Marxist or secular-humanist point of view, or

some other vintage; second, texts originally written by Muslims in Arabic or Persian and then translated into English or French—for example, the works of the late Sayyid Qutb; and third, works by Westernized Muslims, people with Muslim names but who had little to do with Islam itself as a religion. It was in this context that I finished my PhD. I was the first Muslim—*astaghfiru'llāh*—who was highly educated at the best universities of the West and who yet entirely rejected the modernist, Orientalist approaches to Islam. It is in this context that, at the age of twenty-four, even before I finished my PhD dissertation (which later was published as *An Introduction to Islamic Cosmological Doctrines* [SUNY Press, 1994 (1963)]), I wrote my first book. I concentrated on Islamic science and philosophy. In the field of philosophy, for example, along with Corbin, we changed the entire intellectual scene by producing first-rate scholarly texts written from the Islamic perspective. Despite great opposition, not only by Western scholars but also by secularized Muslims including Arab nationalists, I fought single-handedly... eventually, there were enough books and articles that the notion of Islamic science became firmly established.

One thing I want to emphasize, related to this: one must be very careful when writing, especially if trying to carve a new path; no one should be able to criticize you for not putting a diacritical under “z” when necessary, or other such things...

Iqbal: Yes. All the mechanics of it—

Nasr: Yes, one must carefully proofread one's work. I know so many Muslim writers who know a lot of things and who have a lot to say, but no Western scholar takes them seriously because they are “sloppy” in their presentation. My first three books were published by Harvard University Press, which was an achievement, *al-ḥamdu li'llāh*, not only for me as a Muslim but also on its own terms. These books did extremely well outside of America as well, and now they are being read in places as far apart as Pakistan, Nigeria, and Malaysia. At that time, I was the only Muslim scholar living in the West who had the courage to write from this perspective, but now, thank God, there are many Muslim scholars appearing on the world scene.

Iqbal: Finally, if you were to map out the development of Islamic studies in the Western university system, what would you consider its milestones?

Nasr: First of all, it was the singular matter of being able, both in the classroom and in publication, to present Islam as a revealed religion, as Muslims believe it to be and not like, say, Michael Cook, who studied Islam as a historical accident that just happened to emerge in Arabia. Let me give you an example. There is a great difference among the Jewish, Protestant, and Catholic scholars in their interpretation of Judaism and Christianity, but a truly rooted Jewish scholar can be distinguished from one who studies Judaism from the outside;

and the same is true for Christianity. Of course, one cannot preach religion at an American university, but at the same time one has to remain within the fold of that religion in order to present it authentically. This is a separate and ongoing debate within departments of religious studies, into which I cannot go here, but for my part I am very opposed to the secular approaches to the teaching of religion—it is like saying that a music teacher has to be musically deaf. Obviously, when teaching at an American or European university, one cannot teach as if one were at al-Azhar; but nevertheless, one can present Islam as a revelation. If students want to understand the meaning of revelation, that is a separate issue; one cannot dictate to them a particular understanding. Second, there must be an in-depth critique of Orientalist and social scientific scholarship concerning Islam, to which I have also been contributing for the last fifty years. The achievement and impact of Edward Said in this regard is truly remarkable, although his *Orientalism* does not directly deal with the study of Islam as such. Third, Islamic scholars must thoroughly know not only their own tradition, but also what Western scholars have written on the subject. This means not only the English but also the German, French, and other-language scholarship. One must be able to present a critique of that scholarship based on knowledge; no one is going to take a Muslim scholar seriously if his or her scholarship lacks this aspect. This requires linguistic competence as well: Arabic, Persian, English, German, and French are absolutely essential, and at least one other Islamic language such as Turkish or Urdu if that scholar is concerned with the Ottoman world or Muslim India. A test of a good Muslim scholar is that he should be able to give a respectable lecture at al-Azhar and likewise at a major Western university.

The Western academic scene is changing rapidly. Just in the last few years, there has emerged a new generation of Muslim scholars in Western universities. These younger scholars, some of whom I know and have been honoured to teach, are finding tenured positions and are going to change the entire academic scene. Even fifty years ago, there were few Jewish scholars teaching Judaism at major American universities; yet now almost everywhere they hold high academic positions and most Jewish studies positions are held by Jewish scholars themselves. This is quite admirable. Muslim parents should not push their children solely to become doctors, engineers, and lawyers, but should encourage them also to enter the field of Islamic studies. Thank you.