

EVOLUTION, INTELLIGENT DESIGN AND MUSLIM EVOLUTIONISTS

William Dembski in conversation with *Muzaffar Iqbal*

Evolution met its most serious challenge through the work of scientists and philosophers who connected with the Intelligent Design Movement. ID scientists and theorists have used scientific proofs and philosophical arguments to show how specified complexity cannot be produced by random and chance processes. Pre-modern Muslim scholars had also produced a large body of scholarly works on Design. How can these two design theologies come together?

In this conversation, William Dembski, one of the most important voices in the ID movement, and Muzaffar Iqbal discuss the rise of evolution, its various versions, the recent emergence of Muslim evolutionists, the relationship between the design arguments in the Islamic tradition and arguments expounded by the ID scientists and philosophers and possible future cooperation between the two sides.

Keywords: Evolution; Theistic Evolution; Intelligent Design Movement; Historical aspects of evolution and design; *No Free Lunch*; implications of evolutionary narrative in culture, history, theology; possible collaboration between Muslim scholars and ID movement.

MI: Good morning, Bill and thank you for making time for this conversation.

WD: My pleasure.

MI: Perhaps we can start with a basic definition of evolution.

WD: Evolution is a weasel word that can mean many things, some of which are innocuous. It can simply mean that organisms have changed over time, that organisms can adapt to changing environmental conditions, or that gene frequencies may vary in a population. But tucked among such innocuous claims about evolution is a less innocuous claim, namely, that all organisms, including ourselves, are the result of a blind, purposeless evolutionary process (namely, the Darwinian mechanism of natural selection acting on random variation) that at no stage required God or any guiding intelligence.

Darwinists bury this whopper of a claim among evolution's more innocuous claims, and they do so to beguile an unsuspecting public. For instance, when parents press school boards and biology teachers about what they are teaching their children concerning biological origins, they typically get the innocuous version of evolution: of course you believe that organisms have changed over time ... surely you've heard of bugs developing antibiotic resistance.

Indeed, this is evolution in action. But it is small-scale microevolution that no one disputes and that is irrelevant to the really big claim of evolutionary theory, namely, that the bug that developed antibiotic resistance and you, the poor human whose immune system cannot resist the bug, are both offspring of some common ancestor in the distant past and that the process that brought you and the bug into existence is Darwinian, operating by chance and necessity and without plan or purpose. In particular, you, your aspirations, and the entire human family to which you belong, are simply an accident of natural history, here for a brief moment and destined for extinction. This is Darwinism in its full glory.

To see how this view of evolution is widely accepted among our educators, consider that in 1995 the National Association of Biology Teachers (NABT), which sets the tone and rhythm for biology instruction across the United States, issued the following statement on evolution: "The diversity of life on earth is the outcome of evolution: an unsupervised, impersonal, unpredictable and natural process of temporal descent with genetic modification that is affected by natural selection, chance, historical contingencies and changing environments." Two years later the NABT removed the words "unsupervised" and "impersonal" to placate religious believers. In this way, they attempted to maintain the façade that evolution is perfectly compatible with religious beliefs. But the removal was all for show. A subsequent bullet point states that Darwinian evolution, which is the form of evolution the NABT supports, "has no specific direction or goal, including survival of a species." Thus, for the NABT, evolution remains to this day a Darwinian process that operates without plan or purpose.

MI: Yet, there are also bolder versions of evolution and evolutionists; someone like Richard Dawkins, for instance, would have no need to hide his beliefs.

WD: That is true, but in the 1990s, institutional support for evolution was not so bold; it was packaged to be socially acceptable.

MI: Times have changed; now there is no need to hide; even in the Muslim world, we now have bold evolutionists who subscribe to Darwinian and neo-Darwinian versions of evolution. Yet, they do so exactly how Dawkins characterized them: they smuggle God into the evolutionary narrative from the back door.

WD: I was not aware of that. Do you mean naturalistic forms of evolution have reached the Muslim world as well?

MI: Yes, finally, at least some Muslims have “caught up” with what you have been debunking for years. In the early years of this century, when I published a series of articles on the history of evolutionary discourse in the Muslim world, I stopped that work because I thought this is not really a Muslim issue. But now, we have a new generation of globalized Muslims who are not shy of openly subscribing to a version of evolution that they have constructed in imitation of the model of Christian theistic evolutionism.

WD: “Theistic evolution” is a misnomer; it is really Darwinian evolution by another name.

MI: The problem modern Muslim evolutionists have is slightly different from their Christian counterparts; they have inherited a baggage consisting of psychological, historical, and colonial burdens. By that I mean, when evolution arrived in the Muslim world in the 19th century, there was neither science nor scientists anywhere. It was received by the self-style reformers, politicians, poets, and journalists and they made out of it what they made. But now there are thousands upon thousands of Muslims who think they are scientists—although they are not by any definition of the term—and some of them dabble in metaphysics, kalam, and classical discourse on creation of the world and they are attempting to find evolution both in their Scripture as well as in what they think is the pre-modern discourse on creation of the world. So, we have a perfect swamp where psychological needs, complex emotions, and historical forces make it impossible to have a rational discourse.

WD: Interesting.

MI: In some ways, these Muslims are going through what happened in the Christian world back in the 19th century and early 20th century, which was to insert God in the evolutionary process, so we have an Islamic version of Christian theistic evolution, which, as you say, is nothing but the same old evolution. I am, therefore, very much looking forward to our conversation this morning, as your work and the work of other Intelligent Design Movement theorists and scientists is fundamental for

the scientific refutation of evolution from within the fields of science, mathematics, and philosophy. What is strange in the current scenario is that some of the new Muslim evolutionists are writing against your work as well as that of Michael Behe, to promote their own versions of evolution.

WD: Are you saying that they are introducing an Islamized version of Darwinian or neo-Darwinian narratives and for that they need to reject our work or are they producing new critiques of what we have said about the naturalistic worldview? I mean, are they actually coming up with a new critique of Intelligent Design from an Islamic point of view? I and my colleagues in the Intelligent Design movement have gone after the brute, purely naturalistic process of evolution, which—it is claimed—is able to create all biological complexity and diversity, and we have shown how that is untenable. So, if the Muslim theistic evolutionists are rejecting this critique, then they are supporting evolution broadly construed. If, on the other hand, they are promoting essentially what the Christian theistic evolutionists are doing then they are taking the materialistic theory of evolution as it has been put forward and then putting a veneer of theism on it and saying that this is how God did it.

We have a group within the Christian world called BioLogos—they are theistic evolutionists. Francis Collins was one of the founders. They have put forward a view that a materialistic understanding of evolution is as far as the science can go and that God is still in some way involved, and they reinterpret Scripture according to this materialistic science. Their claims are in the end purely theological claims. So there is a separation or compartmentalization: science does one thing, theology another, but the science cannot exceed materialism. And this is where Intelligent Design parts company with theistic evolutionists and materialistic evolutionists, in saying that there is good scientific evidence for the activity of intelligence, especially in biological systems, that there are clear marks of intelligence—that there are features of biological systems that are beyond the reach of these materialistic processes.

Darwinians, neo-Darwinians, and materialists have put forward a theory of process. They argue you evolve from point A to point B. What we would say is, well, if you have a process, you have to have the resources to move from point A to point B by purely materialistic means. If you want to get to the top of Mount Everest from the bottom, you need certain resources. Pogo sticks are not going to get you there. And so you're going to need some equipment, some serious equipment, to get up the mountain and to stay warm. And if you are going to be up there for any length of time,

you will need some extra oxygen. So, there are various things you're going to need and it's provable that without certain resources, you will not be able to get to the top of Mount Everest. We say: there are good reasons to think that natural selection, heredity mutation, genetic drift, lateral gene transfer, symbiosis—none of the material mechanisms, are adequate to move the evolutionary process from point A to point B. Point A is one level of complexity and point B has some fundamentally new level of biological complexity.

MI: So there's a negative argument here.

WD: Negative in the sense that you can't do this without that. You might say it's a question of evolvability and un-evolvability; whereas for the conventional materialistic evolutionist, everything is evolvable. One thing is connected by an evolutionary path to every other thing. And we would say that there can be evidence that those sorts of connections don't exist, given the sort of resources the evolution gives them. My own work on Information theory sets these limitations; My book, *No Free Lunch*—which was, I think, our first point of contact—was basically an application of such ideas to biology. My subsequent work on conservation of information showed that one cannot simply blithely attribute all this power to the evolutionary process. You have to demonstrate that it can do this work, and if it can do this work, if there is evidence that could show that it can do this work, then there should also be counter evidence that it could not do this work.

If there is a transaction, there is a party and there is a counterparty. It is the same with evidence. If evidence can in principle support an idea, then evidence should also be capable of undercutting an idea. But if you read some of the evolutionists, it is as though there can be no evidence against their theory. I think there is a lot of play-acting and pretense here and what's needed is to keep pressing on these points.

The problems for the biologists are only getting worse. The more we learn about these biological systems—the more we look inside the flagellar motor, for instance, or at the language structure, the complicated systems we ourselves are developing in other contexts, such as the digital data embedding technologies, where you embed one message within another, the more implausible does a naturalistic origin of biological complexity seem, especially the genetic code. There are all sorts of things that we have independently developed in design technologies that resemble complex structures and functions we find in the cell, so there seems to be very powerful evidence that there is real design and not just an appearance of design design in biology.

Somebody like Richard Dawkins can open his book *The Blind Watchmaker* and say biology is the study of complicated things that give the appearance of design. But by that he means that there is no real design. Well, if it merely *appears to be designed*, what would it take for it to be really designed? That's why it's important to hold people's feet to the fire. You and I have found—as you're in Canada, I am in the US—that especially in North America, there's great resistance to intelligent design. But if you look across the globe, there are places where there is greater openness to these ideas. In Brazil, for example, there has been tremendous openness so that the universities invite these ideas. And I've certainly had very friendly interactions with Muslims who've invited me for instance to Turkey. I know I had an invitation from somebody in Iran, and I was open to accepting that invitation. To your point earlier, after 9/11, things just became more difficult and then with all these conflicts that the US has been involved with, it's not easy for people like me to circulate freely in the Muslim world. But I am open to talking to any friendly people who find these ideas congenial and want to develop them.

MI: In the context of North America, there is no raging discourse on evolution in Canada; it only happened in the United States, but it has left a residual impact everywhere, especially when evolution is posited against creationism, which has a very negative connotation in this historical context. So, what happened in the United States is, in itself, problematic to use as a framework of discourse.

But one of the criticisms for your work—in fact of the whole intelligence design movement—is the label it receives, which states that it is just creationism by another name. Of course, from the Muslim perspective, creation has a very different connotation. The word creation in the Qurʾān has very different connotations than what we understand from the term creationism these days. There is no relationship between creationism and the Qurʾānic narrative on creation. The Qurʾānic time frame in its description of the creation in six “days” is different from the Biblical narrative in many ways, not the least of which is the concept of “day” itself. The Qurʾān does not have the sequential nature of events as the Bible does and there are other fundamental differences between the two accounts, but what is really fascinating for me is the Qurʾānic arguments for Design; they are so widespread throughout the text that one cannot really not notice insistent Qurʾānic invitations to look at the design of the cosmos, the orderly movements of the planets and stars, the rhythm of seasons, the regenerative processes of water, and within our own selves, how our fingertips are proportioned—the word design is just deeply embedded in the Qurʾān.

Wherever you look there is a design. The Qurʾān says, just look, you will find that there is nothing random. Verse after verse, it calls its readers to look, and look again, is there any flaw in the making of this wondrous cosmos? But, more importantly, it leads us to believe that this design is because of a Designer and not just any designer, but *the Designer* Whose knowledge is such that nothing can escape it. Moreover, it states that there can be only one Designer. This second part of the argument rests on the logical impossibility of having two designers for what is so harmonious in all the realms of existence, for had there been two designers, there would have been internal conflict. You cannot have a system working with two designers.

Another aspect of the Qurʾānic design argument is that it is presented in a text that has remained stable over the course of 1400 years and that has its own interpretive system, which is fully sourced, anchored in language and history, and within this system of interpretation, design has been consistently understood as the work of an All-knowing Designer. Al-Ghazālī, for instance, wrote this wonderful short treatise on the Qurʾān—*Jawāhir al-Qurʾān*—wherein he argues that the hexagonal structure of the beehive is the only possible structure that provides bees with the maximum storage capacity using the least amount of bee's wax. He goes through all the possible combinations and comes up with this incredible logical conclusion that had it been a circle, the individual bee cells would not stack without gaps and the overall structure will be weak. Had it been triangular, individual cells would stack without gaps, but he asks, have you not looked at the shape of the bee itself? It would be impossible for the bee to store honey in that corner of the triangle where it cannot reach and hence it would not be economical for the bee to use a triangular or a square cell and the same goes for every other shape. And he concludes that a hexagon is the only geometrical structure that provides the maximum space for storing honey, using the least amount of beeswax and it is the only shape that provides maximum stability. He died in 1111.

This is just one of the countless examples of observational, logical, philosophical arguments supporting design. Of course, Darwin was aware of this design; he actually mentions the hexagonal structure of the beehive in the *Origin of Species*, but he does not look at the design from the perspective of al-Ghazālī, but regardless, he could not have shown an evolutionary path to the design of the beehive. Bees would have to have a huge number of international conferences to come up with that design which is observable all over the world throughout the entire span of history. And that is just one, out of countless examples, which one can

cite to prove the existence of design at the micro as well as macro levels of this enormously interconnected universe.

Obviously Muslim scholars and scientists of pre-modern times did not have the tools that we now have to do experimental science. The Intelligent Design Movement has enriched this field by providing data which Muslim scholars of the past did not have—I am particularly thinking of Michael Behe’s work. Your work, and the work of other scientists and philosophers in the Intelligent Design Movement is, in fact, an extension of the pre-modern arguments and therefore, I have often wondered why the Intelligent Design Movement has not looked into what is available in the Islamic tradition on design. A related question is: Why is the Intelligent Design Movement not interested in affirming the Designer; why does it stop at Design?

WD: I don’t think I would agree with you there. I have done studies in the sciences, mathematics, philosophy and also theology; I have written a book, *Intelligent Design: The Bridge between Science and Theology*. Intelligent Design is really three things: At the base level, it is a scientific program looking for evidence of intelligence in the world. But I think it is also a way of understanding divine action, what the divine does in the world. Also it is interested in seeing the marks of intelligence that God has placed in the world. And then I think it is a way of thinking philosophically about science, about the types of processes that are in the world; it therefore intersects with the philosophy of science. And I think it can also be viewed as a form of cultural engagement because materialism is so entrenched in the Western society, so it provides a challenge to it. There is an “If/then” condition that is relevant here: It is not “If evolution, then materialism,” rather, it is “if materialism, then evolution has to be true.” If you have a materialistic or naturalistic worldview, you don’t have any choice but to have some sort of materialistic evolutionary process. Elegant design negates that conclusion. It’s saying that a materialistic evolutionary process doesn’t work. It’s refutation then becomes a matter of logic, Aristotelian logic, which the Muslim scholars helped revive and keep alive, which Western scholars were then able to use finally.

“If A, then B; not B, therefore not A.” So if materialism is true, then you have to have a materialistic theory of evolution, but a materialistic theory of evolution cannot be true because Intelligent Design shows that it’s fundamentally flawed. Therefore materialism is false. And I think that’s the sort of logic that most Western intellectuals fear, and hence they simply cannot permit Intelligent Design, because it’s not just that evolution that is challenged, it is the whole materialistic worldview.

That, however, does not get you the Creator. I am a Christian. I believe God is the designer of the world. I don't think you have too many options once you have real design in nature. One option is certainly a transcendent Creator—God, as in Islam and in Christianity. But you can also have other approaches, pantheistic approaches, for example, where the purposes and guiding forces are built into nature, and there can be other ways of non-materialistic explanations. I have always said that Intelligent Design is friendly to theism, but it does not necessarily get you to the Creator. But my own approach is to keep pushing these ideas, keep explaining where Design leads you. Ultimately, it is in God's power to guide people.

MI: That's very Qur'ānic! Ultimately, it is in God's power to guide people! God even says that to the Prophet Muhammad in the Qur'ān: *You surely cannot guide whoever you like, but it is Allah Who guides whoever He wills, and He knows best who are guided* (Q 28: 56).

It is not in the human realm, yet, there is a fine line between belief in God which becomes personal commitment and finding the designer in the creation. Meaning, as you said, there could be many other possible explanations of why the design is there. Even those people who would say, I accept design as you have proved it, but my idea of this design is that it came from some super intelligence, instead of God you are talking about. So, the tent becomes bigger. Obviously, there are various religious traditions within the so-called monotheistic three religions: all three have a very specific concept of God, there are many differences within these traditions and how they perceive God, but overall, there is this idea of the presence of God not just in history, but also in continuity of our existence—His continuous presence in the design. Intelligence can be discovered in the past, but it is also what is here and now. Did God just plan everything intelligently and leave it? No. Our belief—and also observations—tell us, no, it's not a one-time clock that was made and left to function on its own; rather, its very functioning today, at this very moment, requires the continuous presence of God in the processes that can observe objectively. As al-Ghazālī points out, fire burns, but not because of any inherent, mute, forever-present quality, but because God allows it to have that property at the time it actualizes and when God denies that permission, it becomes cool to His Prophet, Ibrāhīm, who is the common link between Islam, Christianity and Jewish faith.

So this takes our discussion to a different level, because not just the natural world but the entire order of cosmos and all it contains has a coherent and interrelated functionality with a specific design that is observable

in history and nature. We have in the Qurʾān, for instance, verses which speak about the ants—actually one Sura (Q 27) is named “The Ants”—when an ant perceives the marching army of Prophet Sulaymān, it says to its fellow ants, “*O ants! Enter your dwellings, lest Sulaymān and his troops crush you, while they are unaware.*” Then, there is this hoopoe who is working for a Prophet and who brings him news of a land where people worship the Sun; we have mountains hymning with another Prophet, rain falls only by the Divine permission—all of these may be dismissed by the evolutionists as faith-based assertions, but then, we have, in the same Book, verses pointing to many observable facts based on the visible and accessible “sky” that has a design based on a specific order: the sun and the moon revolve in their own orbits, there is beauty, perfection, and order in this observable universe; the sky of this world is adorned with stars, seasons are cyclical, water regenerates in a very specific way and we are told that the entire humankind could not have devised a way to produce any of this—from the tiniest specs of sand in the desert to the unfathomable distances of the cosmos—all work together in perfect harmony.

Obviously, some of what I am mentioning are events and claims only accessible to those who believe in the Book I am referring to, but since the same Book, which we believe to be the actual Divine Speech, presents to us a vast array of observable phenomena from three distinct realms—a vast cosmos with many processes we can study, the entire span of human history, and our own selves—we can convincingly move from faith-based knowledge to data-based, testable knowledge in all three realms from which the Qurʾān presents data for our consideration. Since we can objectively investigate this data, our claims are not entirely based on faith statements. In fact, the Qurʾān asks us—over and over—to observe and investigate the observable realms in order to reach a level of certitude in our faith so that it becomes rooted in both the rationally observable world and the supra-rational intuitive and internalized state of knowledge that transcends the rational realm.

Since evolutionism is not merely limited to biology or life systems, and since it is a philosophy or pseudo religion, and since it is the very foundation of our post-renaissance modernity, we have to consider its claims seriously for they impact not just the biological realm, but the deepest levels of our existence in all realms. Since evolution is holding up this big tent, if it falls, the entire tent falls, and thus, stakes are high for the entire edifice of modernity; hence the fierce resistance against any deconstruction of evolutionary narrative. Perhaps this is why you have faced such fierce resistance and opposition to your work.

WD: In my faith tradition there's a fundamental distinction between God acting in redemption and God acting in the physical world. God reveals Himself in the world and also in our lives. And so I think with reference to your point, God acts redemptively in history to draw us to Himself. It seems to me that once you reflect on God, then you are forced to a view of creation of the universe—creation without the ism—so no young earth creationism, but just that God is the creator. But simply a doctrine of creation, I think, can only take you so far. You still need the personal aspect. What does it mean to have God's presence in individual lives, which helps us to relate to God. If we don't have design then we are going to go in the wrong direction. We see this rampantly in Western culture now where people have all sorts of issues with sexuality—what does it mean to be of one sex or the other. I don't see how that would really be possible if we take seriously the notion that we are designed, designed in certain ways to fulfill certain roles. So, there are huge ramifications in the culture, in all fields, but I think there's still room for separate domains, for other disciplines to function independently from the science of design. I think it's not that ethicists or philosophers of science or theologians are going to be out of business because intelligent design establishes that there is real design in the world. There is still room for separate disciplines. But it does seem that many disciplines are going to be affected by intelligent design, just as many have been affected by evolutionary theory. I remember reading a book by Stephen J. Gould, *Rocks of Ages*, where he said that ever since Darwin we know that we were not created in the image of a benevolent God. That's a huge statement. So this is an implication that he draws from evolutionary theory. You look at the field of evolutionary psychology where the human person is understood in terms of an evolutionary past, and you see ramifications of the evolutionary narrative in all sorts of places. Even people writing diet books say we should have a certain diet, a paleo diet, because our ancestors 100,000 years ago were hunter gatherers, and this is what they ate, and so we should eat the same. They are assuming an evolutionary past. What's interesting about many of these claims is that there's absolutely no evidence for them. We don't know how people were living 100,000 years ago, what exactly they were doing, how they were subsisting, and what sorts of psychological forces were at work. I think it's pure speculation. They just tell an evolutionary story, so, it seems that evolutionary theory has been hugely influential.

MI: Yes, everywhere; in all disciplines, history, psychology, anthropology, our whole understanding of human self and human history has been changed ever since Darwin's ideas took roots. Not just the natural

history, but the human history as well. The lens that was constructed, I think, was constructed within the context of Western civilization's own journey after the Renaissance and there is an intellectual background to Darwin's arrival, Western civilization had reached a certain point of receptivity for his arrival and he could not have come later or sooner with such force. But the problem is that the Western civilization is no more just in the West, it has practically taken over the entire earth, so I despair that there is no place left on earth which is immune to this worldview, and I do not mean I despair *qua* despair, because I believe in God's Power to protect and safeguard what He has designed, but I do not see any other civilization left on the face of this planet anymore. You go to Makkah, you go to Madinah, you go to the heart of Islam's traditional homelands, and you see that everything has been transformed by the reach of modernity. Deep in the deserts, where no human presence was felt for millions of years, we now see a huge change due to modern technology; you see the impact of these new tools everywhere. So, what Heisenberg wrote in 1957 has come to pass. He said every tool carries with it the mark of its maker. And the tools, technologies we now have, have reached everywhere, and with them has come the spread of a lifestyle which is essentially a product of Western civilization and people are blindly following it everywhere. So, you despair of any redemptive force left to awake people and prevent this plunge into an abysmal state of existence based on the false narrative of evolution. There is this ape-like imitation of the Western civilization all over the world and a lot of it has happened through the transformation of the education system. The entire Muslim world is now in the grip of this new education system, which as you mentioned before, has accepted evolution.

The Muslim world had an intellectual collapse, an implosion of sorts where our scholars were unable to recognize what was coming through the Scientific Revolution of the seventeenth century and when they realized, it was already too late: colonizing forces were at their door steps and since then it has been a race against time. We had people from within our own culture advocating for adoption of modernity and all its ills projected as progress and they have been successful to change the entire dynamics of a civilization and now, there is nothing left, it seems, that can halt this mad rush. So much has changed over the last hundred years, and especially since the beginning of the twenty-first century that there is now only one science on this planet and this science is beholden to evolution. And not just the science, but also all other disciplines as well. The way we interpret Scripture, for example, even that has changed and there are Muslims who are trying to reinterpret the Qur'an to

accommodate evolution.

But I want to move on to the question of the possibility of some common ground between the Intelligent Design Movement and Muslim scholars who are attempting to bridge the gap between what pre-modern Muslim scholars were saying and what the new dilemmas of modernity demand. There is a certain natural common ground, it seems to me, and we can work together on the applicability of the Design perspective not only in science, but also in fields other than science, such as history, literature, anthropology, cosmology, and others.

WD: Certainly, as a believer in God, I think God has a purpose. God is guiding history. God knows where history is going. But it's not clear to me just what God's purposes are, at least in the broad full sense. I may see in my life certain patterns, certain things that happened and I can say O! God acted, God guided me in this area and so I am at this place in my life rather than that place. I have that sense and sensibility, and this is one of the principles in my own work on intelligent design: there can be false negatives, false negatives in the sense that we don't see design and yet there actually is design. We do not see it because we just don't know enough. We won't be able to get around that because God does not reveal everything to us.

MI: And our intelligence is also not infinite; we are limited.

WD: Yes.

MI: Another fundamental aspect of design—and I mean not just the design in the natural world, or biology or physics, or the design that is observable in the cosmos, in the biological systems, within the human body, in the beehives, everywhere we look—but the very concept of design itself—seems to me umbilically connected to what is going to happen to us, to the entire cosmos, once it comes to its logical end. Individual lives come to a certain end at the time of death, the whole cosmos is going to come to its logical conclusion at some time in the future; what will happen then? Do we see design in this? Since everything that is designed has a purpose, what is the purpose of this designed cosmos and all it contains? We don't have the intelligence to fully comprehend God's purpose, but at some level, we should be able to comprehend the broad contours of after-life because of the design of life. There has to be a future after personal death, after the "death" of the whole cosmos itself. So that takes us to consideration of design beyond this life; a design that is built within the design of this life, and a purpose that is also built into this design itself. There is no way Darwinian or neo-Darwinian narratives can generate

any concept of a future. So, those who do not believe in the design need to construct their own futures, for the individual as well as the collective life, and for the whole cosmos as well. So that takes us to a very different dimension of the design. The inference from design of the natural world around is an opening to the future.

WD: Well, it certainly seems right to say that if there's design, there's a purpose and purposes tend to be future directed. You're trying to accomplish something with the design so that what it is that you're trying to accomplish seems downstream from the actual implementation or creation of the design. So it does seem that there's always a future dimension to design. Insofar as there is a design to our life, to our history, to what God is intending for us and for humanity, there's a future dimension to that and that's going to be very important. But as we were saying earlier, there is the question of our own knowledge of design. I mean even in biology, it seems that we're only scratching the surface of complexities inside cells. So will we ever, with our finite intellects, come to have a comprehensive grasp of what is going to happen in the future? In the game of tic tac toe, for instance, we are trying to get three x's or three o's in a straight line in a three by three grid, and we can finally understand how it works, but what about the game of chess? That's more complicated. We don't understand whether optimal play will have the white beating black always, or if it would always be a draw; it doesn't seem that even with vastly increased computer power, we are ever going to be able to resolve (just given the limitations of physics), so yes, there are always going to be limitations on how much we can understand, given the lack of comprehensive knowledge about the fundamental physics, to say nothing about dark matter about which we know nothing or next to nothing.

MI: For sure. Another aspect that I wanted in particular to discuss today is, once again, based on the work of al-Ghazālī, whom we mentioned before. He was not only a scholar of the highest caliber, he was also a practicing Sufi, who had achieved a high station in the spiritual path. In the short book I mentioned before, which has been translated into English as *Jewels of the Qur'ān*, after giving examples of design in the creation of the bees, the spider, the fly, the mosquito, he says if you were to run after every designed species, every instance of Signs of God in the manifest world, you will exhaust yourself, because there is no shore of this ocean. There is simply no end to it. So, O reader, do not spend all your life trying to find all the marvels of design in the natural world, because you would never be able to find even the tiniest of these marvels, and you only have one limited life, so wake up, because not only you, even if the entire humanity

were to get together and do this activity for their entire lives for hundreds of years, it would still be impossible to reach the bottom of this ocean, so, just take lesson from what you have found and move from the visible to the invisible, from design to the Designer, and prepare yourself for what is inevitably coming—your eternal life in the Hereafter.

So, I always think of the work you and others in the Design Movement have done during the last 30 or so years, and how much evidence you have gathered, and I think, that should be sufficient to establish the fact of Design, even though there are other benefits in continuing that research. Yet, for the purpose of establishing guiding principles, these are wonderful discoveries spanning many systems, specified complexity in the biological systems, mathematics, Information science, and other domains, and the theoretical framework you have developed—all of this convincingly establishes a Design epistemology which should lead to the ultimate purposes.

WD: The reason to investigate design is to discover the marvelous designs in nature. So, I think it is ultimately to praise God. That's why the designs are put there and made so beautiful, so exquisite. That said, we also need to bear in mind that there are things like parasites and things one might call evil designs. From my theological perspective, such dysteleology is a consequence of the fall of humanity. Adam and Eve sinned and however one wants to interpret that, the natural world was affected by that. Granted, the world may be imperfect. There may be imperfect designs, but there's still enough brilliant design to say that whoever is behind this was a great genius. We can look at a work of art that's been defaced. We can still see the signs of the genius behind it, even though it has been defaced. How much evidence of design do we need, really? I think all we need is one clear example. Only one is needed to refute the Darwinists. This is why they will never admit that we've made a good point here. They adopt what I call zero concession policy. Thus they will concede no instance of design. There can be no design whatsoever as far as they are concerned. So, given that they refuse any design, even one case of clear design should be enough to refute them. In fact, it seems that we have much more than one case and at so many levels. Every level of organization, biology, origin of life, all the way through to the highest organisms. And then organisms are organized hierarchically. The body has tissues. Tissues are composed of cells. The cells have a metabolism, which in turn requires molecular structures, and it just keep going—to all the hierarchies displaying design at every level.

MI: Exactly. Extending to the entire observable cosmos itself, the sun and the

moon, the planets, enormous systems, galaxies, and the tiniest systems—all of them in harmony with each other and we are part of it.

But you have brought up something we have not discussed yet—the question of evil. What is perceived as evil by an individual human being, or even collectively by groups of human beings and the objection then is: why is there evil if everything is designed? Why do we have so much suffering? I think that motivated Darwin in the first place and he ended up with the wrong explanations and others picked up what was needed by them for their own purposes and we have ended up with this materialistic never-ending evolution.

The questions which are related to this are fundamental: If evil is part of the design, then what kind of God is there who wishes us to suffer? So, this is a theological objection to design argument, which is not new, but the Design Movement has not given much attention to it, I think. How would you respond to this criticism? We just had a huge earthquake in Turkey, in the wake of which many people have come up with this old objection one more time: If the earth was really designed, it would not have such fault lines. I must repeat, it is not a new objection, we have tremendous amount of literature in both the Christian and Islamic traditions that deals with the question of evil and suffering, but I wonder what would you say to this.

WD: How do we make sense of parasites, the whole predator-prey relationship, and what does that tell us? It seems to me that there's clear evidence of design and yet we have these other types of design that cause us moral qualms, and I am not sure there's any escape for that. "Evil design" is a fraught issue. Evil is always a negation of good. We think of a parasite as evil because it exploits another organism. It would be good if it lived symbiotically rather than by hurting other organisms to its benefits. Evil is a reaction to a good and if you take seriously the doctrine of the Fall, that humanity has fallen, we are individually sinful and that sinfulness has also affected nature. I have a friend, Scott Minnick, who has worked on *Yersinia pestis*—the causative agent of the great plague of Marseille (1720)—the Bubonic plague bacterium, which has a poison delivery system that seems to be exquisitely tuned to the human body and to delivering its poison so that a person dies of the plague. And yet he argued that there's evidence that this poison delivery system, this Type-III secretory system, had a different purpose at one point—in fact, that it may have been a flagellum and then it sloughed off its motility to cause that causes a lot of destruction. That would be an interesting thesis, namely, whether every case of bad or malevolent design, is really a case

of a previously good design. It would be an interesting line of research to see to what degree evil designs resulted from previously good designs that were perverted. Essentially, there are two issues here: Number one is what human beings can destroy, transform or change within God's design. Something that was designed to do something is now doing something opposite to what it was designed for...

MI: That is really an intriguing thought. A beneficent design turning evil because of human depravity! In the Qur'ān, we have *corruption has spread in the land and sea because of what the hands of people have earned, that He may let them taste some part of that which they have done, that haply they may return!*

WD: The other part is what we in our limited understanding consider it to be evil, but it may not be evil in the overall scheme...

MI: Yet, the argument goes like this: the earthquake in Turkey, for instance, raises the following question: Was the Earth designed by God to have quakes and destroy human life and cause suffering? It certainly appears so, because no human being could have reached down to the tectonic plates and change the design to cause this shifting. The release of this destructive energy is not a human act. So, it means that God either designed the earth to have these quakes or He caused that part of earth to quake because of what human beings were doing. In both cases—the argument goes—we have proven that either there is no designer or we have a malevolent designer.

When applied to your work and the work of the Intelligent Design Movement, the argument becomes more specific: You claim there is a design, everything has been designed, but is the design inherently flawed? Or there is no design at all.

WD: But the question is, what is our understanding of the Creator in terms of those designs, those systems that apparently cause or allow for suffering to human lives? Could God not have created the Earth to be a much friendlier place so that there would be no earthquakes, no tsunamis, no hurricanes, these very destructive events which kill people. We die and we will all die. And it seems we have to say that God is responsible for that as well. Certainly, as I read my Bible, Old and New Testaments, it seems humanity was created to live forever but then it sinned and that's what brought death. So, there's human responsibility, there's complicity involved in destruction and so once death is on the scene, how that death happens is perhaps not so important. I remember debating Christopher Hitchens and he was complaining that God kills a lot of people, and my response to him was God kills everybody. But there's always a

redemptive purpose. Why does God let death come? Well, if we're sinful beings and if we live forever in that sinful state, it's going to mean that the corruption becomes more and more and worse and worse. So this is a way of bringing an end to that, but then also allowing for redemption in an afterlife. That's at least how I see it now. Again, I am very much in my own Christian tradition, but that's how I see it. For me, the bad design, the evils that happen against the Earth, that's designed, I believe, the Earth is designed—just look at all the features of Earth, such as the water, the temperature, the atmosphere, all these things are conducive to life, it seems, that it calls forth for design. And yet there are also these destructive patterns.

MI: Isn't that also part of the design, though? That God created individual lives for a limited period of time and He created life and death, as a verse in the Qur'ān tells us, *He created life and death so that He can test who among you is best in deeds and He is All-Mighty, All-Forgiving*. So even what we perceive as suffering or death has a purpose, a higher purpose. And that test cannot be conceived as lack of design, because there is something after death—the Divine design includes a future, which human beings tend to forget.

WD: I don't think anything takes God unaware. The disturbance that we see is at some level God's plan. That may be a hard truth to accept because we also believe that God is kind and He loving, but it's a love that has to act redemptively in a world that's fallen; God has a lot of things to keep track of. I think, to your point, suffering and adversity, it seems, are part of being, or part of the testing that you were saying, so this life is a test; it's not meant to be a country club.

MI: Exactly. Life is fundamentally incomplete without death and the next life. I think we have covered enough ground today. But let us just talk a little bit about the possibility of some areas of collaborative work.

WD: Sure.

MI: One thing I had previously alluded to is the question of historical depth to this whole idea of design. We have a large body of scholarship in our tradition that explores the question of design from various points of view. In fact, this arose from the very text of the Qur'ān which points to design in creation, Divine action in history also has a design, there is the *Custom of Allah*, God's consistent and unchanging ways throughout history, and these have links to the origin of the cosmos as well as of life—all of these are deeply embedded in the Islamic scholarly tradition. And there are also connections to the Greek philosophy. When Aristotle came to the Muslim world through a sustained translation movement,

he and other Greek philosophers enriched the intellectual discourse in many ways, but these works also produced a fissure, an internal conflict with the Qur'ānic worldview. For instance, the fundamental solution Aristotle had found about the question of the beginning of the cosmos was to conceive matter as being eternal. This was a primary axiom for him, a given. But if matter is eternal and God is eternal, then we have two eternals and that is anathematic to the Oneness of Creator. We have this uncompromising Unicity of the Creator in the Qur'ān. So, a conflict arose which took almost three centuries to resolve; there were fierce debates, tools of arguments were sharpened and new avenues were discovered. Islamic Design Argument arose as an aid to assert the Qur'ānic worldview. This whole tradition, I feel, can be of enormous benefit to the contemporary discourse on Design. Perhaps we can join hands and minds to utilize centuries of discourse. Of course, the modern Design Movement has added a lot of scientific data to what is present in the Islamic tradition, hence blending of new data and discourse with the centuries-old scholarship will produce a compelling case for Muslims and Christians. It will be of enormous benefit, I think, to the entire humanity at a time when history has basically disappeared from the public domain.

WD: For sure. There are certainly deep theological issues related to design and I am not sure to what degree proponents of intelligent design in my circle have addressed them. People who come to mind include William Lane Craig. There is also Jay Wesley Richards, who used to write on these topics, but has shifted focus to other fields. But that could be an interesting conference to have, not just cross-disciplinary, but also cross-religious traditions, including Christian, Jewish, and Muslim scholars. We can all get together, people who are committed to the concept of design and the reality of design in nature, in God's purposes, and then try to understand what that means in broad philosophical and theological terms and enrich our discourse. Let's think more about it as I am sure there are other areas of collaboration.

MI: Indeed. Even just to think of bringing together the work of Design Movement and the pre-modern Islamic discourse on design in general, or even in one specific system, like the human body, for instance, the ear, the nose, and other organs, which al-Ghazālī so masterfully used, is fascinating; it would be of tremendous benefit because we now have specifics which go even to the level of design of the cell, we know so much more compared to the 12th century, even though additional details do not fundamentally change the argument; they provide substantial empirical data. So, collaborative work will be beneficial.

WD: Yes, I think, at some level, the 21st century Muslim, Christian, and Jewish believers can enhance their understanding of God and their praise of God through such discourse.

MI: The eye, for instance, is designed, and so are other organs. Al-Ghazālī invites his readers to just look at the human hand. He says, just look at your hand, if the thumb was not where it is, or if it wasn't there at all, the whole hand would be useless. You would not be able to have the means of gripping anything. His observations are the apparent observations, he didn't have the kind of biomedical information we now have, and if we were to add those new details to his Design Argument, it will just become more compelling and convincing; people would see how the thumb could not have evolved. And likewise for other organs, in fact, for whole systems. These are easily graspable details which might open hearts and minds to a new level of acceptability of Design and rejection of evolution, because this is transformative knowledge, a sort of experiential intelligence.

WD: Yeah, I think that's right. I think if history has any purpose, I think it is that we should grow in knowledge. But it's knowledge that will help us to know God.

MI: Exactly. There is a graphic metaphor in the Qur'ān about people who do not benefit from their knowledge. They are like the donkeys carrying books. Useful knowledge is the knowledge that takes us closer to the Creator. Our Prophet always prayed for knowledge that benefits; he prayed for the ability to see things as they really are. The Persian poet Jāmī, Nūr al-Dīn 'Abd al-Rahmān Jāmī, immortalized this Prophetic teaching in a poem:

*O God, deliver us from the preoccupation with worldly vanities, and
show us the nature of things as they really are.*

*Remove from our eyes the veil of ignorance, and
show us things as they really are.*

*Show us not, the non-existence as existent, nor
cast the veil of non-existence over the beauty of existence.*

*Make this phenomenal world the mirror to reflect
the manifestation of Thy beauty, not a veil
to separate and repel us from Thee.*

*Cause these manifestations to be for us the source of knowledge and
insight, not the causes of ignorance and blindness.*

*Our alienation and severance from Thy beauty all proceed from
ourselves.*

Deliver us from ourselves, and accord to us intimate knowledge of Thee.

WD: Sounds great.

MI: Let us think more about the possibility of collaborative work.

WD: For sure.

MI: Thank you.

WD: It was a pleasure talking to you today. Thank you.