

Focus on science: The fourth big challenge going forward from 2021 is the rapid development of science. Scientific development in medical research gave us the Covid vaccine, where thanks to leveraging what is known and without taking shortcuts, the vaccine was developed in record time and we hope and ask Allahﷻ to make it a means of blessing to deliver us all from this pandemic. There are many examples of how medical research has totally changed the face of health care and the huge impact it has had on life quality all over the world. Smallpox has now been eradicated and programs are currently under way to eradicate poliomyelitis and guinea-worm disease. Vaccination has successfully interrupted circulation of poliomyelitis, measles, rubella and has drastically reduced the incidence of foot-and-mouth disease (FMD) and canine rabies. Sadly, it appears that there is no cure for foot-in-mouth disease to which politicians seem to be particularly susceptible. Talking about stem cell research one of the effects of it is organ regeneration and its impact on geriatric life quality (not lifespans), will totally alter our view of disease. We can realistically look forward to the time when cancer will be eliminated, the blind will be able to see and people will be able to get new hearts. However, will those who are now able to see, look upon a world that will be a delight to gaze upon, or will it make them wish to return to their earlier state? Will the new hearts be filled with love and the Noor of Allahﷻ or with the same garbage of hatred and discrimination? Will better life quality for the elderly be an asset or a liability if it is not accompanied with the economic wherewithal to live comfortably, values of

respect for elders, children who see you as an asset and not a liability and a society that gives meaning to your life? These are not questions that science can answer but Islam can.

What we eat will change thanks to cultured meat. Anyone for cricket steaks? I am not joking. That is the cheapest source of pure protein currently known. What about eating cultured chicken which was never ‘born’ in the traditional sense and not slaughtered because it never lived? Is it Halaal? Once again, this is not an exhaustive list but something to give you some food for thought about how education needs to change to prepare, especially our scholars who understand science enough to be able to adjudicate on these matters.

<https://www.engadget.com/2020-01-28-cricket-algae-lab-grown-meat-future-of-protein.html>

Finally, one of the finest, most inspiring, achievements of humanity in recent times, successfully landing a robot on a planet, 132 million miles (200 million kilometers) away using another robot and with no real time ability to make any corrections. I don’t know how many of you watched that and if not, I don’t know why not. It is certainly far more important and useful than watching Superbowl, World Cup or even Ertugul. It is all a matter of what we give importance to. As parents you may like to think of how this influences your children and what they will aspire to in their lives. I want you to do two things: Watch the several videos on the link that I have given here in the text with your whole family. And on the NASA site, please look at the list of people who were behind this amazing achievement. When you

finish reading the names, ask yourself what is missing and whether you care? The time to pretend that the world revolves around us, is gone. The world never did. It doesn't now. Awake and act or perish.

<https://mars.nasa.gov/mars2020/>

The tragedy of our situation is that though we have a rich history of scientific development, it is mostly relegated to stories and exhibitions of the achievements of Muslim scientists, mostly from Andalusia between the 9th and 12th centuries. We conveniently don't ask the question, 'What happened since then? Why is it that when Muslims contributed so much to the world of scientific development then, in the last 110 years, only two Muslims won the Nobel Prize for science?' In a study done about the reading habits of Arabs today it is quoted, *"the average Arab child reads "six minutes" a year in comparison to 12,000 minutes its Western counterpart spends. It also reported that an Arab individual on average reads a quarter of a page a year compared to the 11 books read by Americans and seven books by the British. The minimum average time that youth is on the Internet, it is 365 hours a year, and if we compare that with the average time an individual Arab spends reading, which is six minutes a year, then the difference between the two becomes clear."*

<https://english.alarabiya.net/articles/2012/07/14/226290>

If these had been people who had never done anything worthwhile, like many others, it would not be remarkable. But for people who gave 60% of the names of stars to the world, who mapped the heavens, and whose contribution started and fueled the Renaissance in Europe, it is both

astonishing and tragic. Qurtuba was known to be a place which had 100% literacy, and which had more books in its libraries than all the libraries in the world combined. At a time when in the rest of Europe even most monarchs and the nobility could not read and write, in Qurtuba, stable hands and gardeners wrote poetry. My brothers and sisters, I remind you and myself that great civilizations are never destroyed from the outside. They collapse when they don't deal with their internal diseases. Our internal disease is ignorance. For people, whose religion is based on a book, the Book of Allahﷻ and in which the first word revealed was "Read", to be in a state where our children, our future, read for 'six minutes in the year', is worse than getting a report of being in the terminal stage of pancreatic cancer. Worse because in cancer, only you die. In this case, the whole nation dies. Instead of appreciating science as the lens to see the signs of Allahﷻ, we are hostile towards it. We denigrate science but run to doctors if we get sick. We must change urgently.

If a father had taken his young son or daughter to the Geneva Motor Show 2015, they would have seen the highlight of the show which was the **Aston Martin Vulcan** with a 7.0-liter V12 engine, a 6-speed sequential gearbox, variable traction control, adjustable suspension and race-spec tyres. What would inspire that child and what kind of aspirations would that child have, seeing state-of-the-art high precision engineering? If the same parent and his children had gone to the Automechanika Dubai 2016 they would have seen

the gold-plated **Nissan R35 GT-R** worth \$1 million as the center of attraction. What would inspire that child and what kind of aspirations would that child have? What does that tell you about the focus of the two societies? One focused on high precision engineering. The other focused on bling. Who wins?

There is among us, a strange and tragic hostility towards science which is even encouraged by our traditional scholars who treat science as if it is from Shaytaan. Many of them actively discourage university education and the practice of the scientific method of investigation and searching for evidence before believing anything. And needless to say, there is perhaps not a single Madrassa or Darul Uloom where science is taught seriously. I know some make a pretense of teaching it because the country where they are located insists on it but when have you ever heard of a scientist come out of a Madrassa? But then when we have a system in which to become a teacher, a formal teaching qualification and knowledge of child psychology is not required, what else can you expect? Amazingly our Madrassa system is the only one in the world where teachers have no formal training in teaching, no lesson plans, no appraisals, and no quality checks. Yet we call it education. This is tragic because all those Muslim scientists whose names we take as pioneers in science, came out of Madaaris. What we know today as the ‘scientific method’ was pioneered by Muslims and used both in science as

well as in theology; most famously in the study of Ahadith of Rasoolullah ﷺ. Yet today it is as if we are looking at two enemy camps.

This hostility comes out of gross ignorance on both sides, about what the other party does and how that is inherently beneficial for both. This is the result of ignoring each other for 7 centuries or more instead of understanding and appreciating. Ignorance breeds fear and that, hatred.

The problem lies with how we address the two: Scientific Temperament (and Method) and Revelation (Qur'an). **Scientific Temperament** consists of curiosity, questioning, reasoning, dissent, experimenting, documenting, measuring, comparison, collecting evidence, conceptualizing, and theorizing and changing those theories when new evidence emerges. It consists of an attitude of openness, encouraging and accepting dissent knowing that those who disagree help you to look at areas in your own blind spot, which is critical for you. It consists of inventing, innovating, devising new methods, tools, and techniques to arrive at physically measurable results. All this happens because the scientific temperament and method begins with the following premises: (1) I don't know. (2) I will believe only what I can measure or have empirical evidence for i.e. (what I can see, touch, hear, feel or measure using tools). (3) I may be wrong and so I am forever open to changing my theory if I am shown evidence to the contrary. To change a theory, even to trash it totally and accept a new one is perfectly normal in the realm of science. Nobody's ego is hooked to his theory and

any scientist worth the name, may defend his theory but if he is presented with evidence to the contrary, he sees it as a sign of development and progress and will accept it.

Religious Thought is based on what seems to be the opposite of this. Islam is based on direct Revelation from Allahﷻ. The Qur'an is the Speech of Allahﷻ, as revealed to Rasoolullahﷺ and communicated to us by him. As such, since the Qur'an is the actual speech of Allahﷻ, the premises on which it is approached are different from those which define 'science'. That is not to say that the Qur'an or its study is 'unscientific' in the derogatory sense that this term is usually meant. But that the nature of the 'science of the Qur'an' is different. The study of the Qur'an is based on the premises: (1) We believe that this is the actual speech of Allahﷻ and so it is the truth in which there is no doubt. (2) We believe what we read without asking 'How'? (3) That the Qur'an deals with the Unperceivable (not just unseen) and is the means of connecting to Allahﷻ. As such, empirical evidence is not necessary in the presence of the Word of Allahﷻ. Theorizing, philosophizing, conjecture, and imagining are all discouraged and even prohibited in matters that relate to Allahﷻ and Al Ghayb (The Unperceivable). This sometimes gives the impression of Ulama (theologians) being rigid and closed-minded and that misunderstanding is the root cause of the antagonistic attitude on both sides. Questioning in any discipline demands that it be done within the framework of the discipline. So also, in Islam.

Every question is welcome, provided it is asked respecting the rules of enquiry. This is not the sign of an unscientific temperament but of recognizing the boundaries and limitations of enquiry. We don't enquire where there is no chance of getting any answer because the Revelation (Wahi) has stopped and because it is not possible to experiment or search for empirical evidence in an area which is 'Unperceivable.' This is directly in keeping with the scientific method, where you can't conduct an experiment for example to measure how much you love your wife. Thank Allahﷻ for small mercies.

Science is the tool by which we can see the Ayaat of Allahﷻ up, close. There are two things: the Khudrat of Allahﷻ and the Sunnat of Allahﷻ. One is Allahﷻ' s Power which has no boundaries. The other is the system that Allahﷻ created by which His creation functions. One is the Qur'an and all the Mo'jazaat (miracles) that are mentioned in it. The other one is called Physics, Chemistry, Mathematics, Biology, and everything that people who don't know Allahﷻ, call 'Laws of Nature'. One tells you the 'Why' of things and the other tells you the 'How'. Both are from Allahﷻ and are intrinsically interrelated. There is no conflict between the two. All the Ayaat that we quote today in Da'awa about embryology, geology, astronomy and so on are all scientific statements but are Ayaat of the Qur'an. All of them were in Al Ghayb at the time they were revealed but today, thanks to science we can see what Allahﷻ mentioned. This confirms the truth that to study the

principles that Allahﷻ established in the creation of the universe is not anti-Islam but a part of Islam. But we Muslims have created a gap, even a gulf between the two, to our own detriment.

Let us see what Islam says about science? Allahﷻ told us about the relationship between theology and science. He said:

إِنَّ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ وَاجْتِلَافِ اللَّيْلِ وَالنَّهَارِ لَآيَاتٍ لِأُولِي الْأَلْبَابِ
الَّذِينَ يَذْكُرُونَ اللَّهَ قِيَامًا وَقُعُودًا وَعَلَى جُنُوبِهِمْ وَيَتَفَكَّرُونَ فِي خَلْقِ السَّمَاوَاتِ وَالْأَرْضِ
رَبَّنَا مَا خَلَقْتَ هَذَا بَاطِلًا سُبْحَانَكَ فَقِنَا عَذَابَ النَّارِ

A'al Imraan 3: 190. Verily! In the creation of the heavens and the earth, and in the alternation of night and day, there are indeed signs for people of understanding.
191. Those who remember Allah (always) standing, sitting, and lying down on their sides, and think deeply about the creation of the heavens and the earth, (saying): "Our Rabb! You have not created (all) this without purpose, glory to You! (Exalted are You above all). Give us salvation from the torment of the Fire.

There can be nothing clearer than this about the importance of science in Islam. Allahﷻ told us what to teach and how to teach it. It is very unfortunate that those who read this Ayah and taught it and memorized it, but didn't stop to ask, "Why is it that when Allahﷻ mentioned two things, His Dhikr and research in His creation, we only talk about one and not the other?" That is how universities, teach about the creation as if there is no Creator and our Madaaris teach about the Creator as if there is no creation. Both are bad but

the latter is worse because it is, we who received the Ayah; we who read it and memorized it. Yet we didn't act on it. We didn't study science and so we remained ignorant of it. That made us suspicious of science, especially because its principles are so different from our theological principles and we started to fear it and to disparage, deprecate and denigrate it. Scientists on the other hand remained ignorant about Allahﷻ and looked down upon us and considered us to be insular, isolationist, ignorant, and backward. If we integrate our teaching, knowledge will flower as Allahﷻ intended it to and we will use science to see the signs of Allahﷻ and use it to fill our hearts with His Glory and Majesty. Science is the tool to view the creation of Allahﷻ by the lens that we see with, which is our heart.

May Allahﷻ grant us the Tawfeeq to create schools where science is taught in way that enables us to see the signs of Allahﷻ in His Creation which will strengthen our Imaan and Yaqeen and increase our desire to meet Him in a state where He is pleased with us.