

SCIENCE AND TECHNOLOGY

Taught to man by God

Speech delivered in Urdu at the Annual Conference of the Ahmadiyya Anjuman Isha'at-i-Islam Lahore (Pakistan) on 26th December, 1982

by DR. ZAHID AZIZ, ENGLAND

The signs of the *Dajjal* (the one-eyed creature whose appearance near the Day of Judgment and his world-domination have been prophesied by the Holy Prophet Muhammad) include the performance by him of super-human feats, some of which, as recorded in Hadith, are as follows :

- (i) *Dajjal* will be able to jump between the earth and the sky.
- (ii) He will traverse the whole of the earth in but a few days.
- (iii) The sea will be only knee-deep for him.
- (iv) He will have mastery over the earth and its treasures, etc. etc.

When Hazrat Mirza Ghulam Ahmad, in the last decade of the 19th century C.E., showed that this 'creature' *Dajjal* was, in fact, the modern materialistic civilisation of the West. Super-human feats of *Dajjal* were easily seen to be prophetic descriptions of the great scientific inventions and technological achievements of this civilisa-

tion. The signs noted above have been fulfilled by inventions such as the aircraft, other rapid transport, modern ships, submarines, and indeed all other technological advances.

It was due to these amazing powers of *Dajjal* that, according to Hadith prophecies, he would weaken the faith of Muslims in God. And that is exactly what happened : the undoubtedly astounding control over the physical environment acquired by the modern West is used to suggest that, in earlier times when man had no control over nature, he invented the concept of God, the Controller. Now, however, man has conquered and overcome nature, and thus disproved the existence of the supposed Divine Controller.

So the question before us is, has man by his inventions got control of the world, or is it in God's hands ?

How things are invented ?

Firstly, it has to be made clear as to what science is, how scientific know-

ledge is arrived at, and how things are invented. The basic principle behind scientific progress is *observation* of various natural phenomena, followed by the use of reason to draw conclusions and do experiments. The Holy Quran says: "And He has given you *hearing and sight and minds*—little thanks do you give" (32 : 9).

The basis of all inventions, therefore, is observation and exploitation of the *already existing laws of nature*, which are *not* made by man. In the invention of the aeroplane, for example, man first observed the flight of birds and tried to copy it exactly, *i.e.*, he attempted to follow a law of nature that he thought applied to him as well. That approach having failed (because man's muscle-to-weight ratio is much smaller than birds), man investigated and exploited the laws of aerodynamics to design aircraft wings enabling a powered machine to fly. Now, the design and shape of such wings, which is still under research, depends on the laws of aerodynamic which, of course, were *not* devised by man.

Such is the case with all other inventions, that man does *not* invent something in an arbitrary manner, in just any way he likes or chooses, but he is utterly and totally *bound* by laws of nature. To record sound or pictures,

man must use tapes or films made of certain materials that have been discovered as having the appropriate chemical properties. To distribute electrical power, so far as present knowledge goes, wires made of *copper* have to be used, not by man's choice, but because nature (or God, in our terms) endowed this metal with the appropriate property.

We note further that this complete and absolute dependence of man (and *not* control by him) upon nature, and upon particular laws of nature he just *happens* to have discovered, shapes the course of history. An important instance, so far as Muslims are concerned, is that since the middle of the 19th century C.E. the West happened to make and exploit such discoveries as led to a technology heavily dependent on crude oil. It also so happened that this raw material was later found in abundance in some Muslim countries. This has led to a complete turn-around in the Muslims' economic and political fortunes, and marks a turning point in history. It could quite conceivably have happened that Western technology could have evolved on different lines, not being so dependent on oil.

The Holy Quran says :

"And We have created for them

the like of the ships, in which they will ride". (36 : 42).

The making of the ships of the future (the 'like' of the ships that then existed) is here ascribed to God because of man's dependence on His laws of nature for inventing these things.

Scientific Discoveries

Having elucidated that, for making all his wondrous inventions, man is bound by the laws of nature that he happens to discover, we turn to a very crucial and interesting aspect of how scientific discoveries are actually made. There are numerous key discoveries in science that were made *purely by accident*. Many of the important discoveries in electrical science during the 19th century, which are quite fundamental, were accidental. As a voluminous work on the history of science says of this field in that period :

"It is interesting to reflect on the sequence of apparently accidental discoveries that led to this stage of knowledge." (*Science in History*, by J. D. Bernal, London 1965, p. 437)

These 'accidental' discoveries were of the kind where, while a scientist was doing some particular experiment, an unplanned combination of circumstances caused something unexpected to happen, to which his attention happen-

ed to turn. For instance, the crucial discovery of a relation between electricity and magnetism was made accidentally by Oersted, who just happened to have a compass placed near an electric current, and noticed that the compass needle got deflected by the current.

Many examples are there in science of 'accidental' discoveries and it confirms the Quranic verse :

"He (God) taught Adam (man) all the names (i.e. knowledge)"
(2 : 31).

These incidents show that scientific advances are not made in a manner planned and pre-determined by man, and are not under man's control. Hence the truth of the verse quoted above.

Atomic physics — another series of accidents

In the early 1890's, just around the time Hazrat Ghulam Ahmad had laid claim to be the Divinely-ordained Reformer in Islam, what is known now as "classical" physics reigned supreme. It was believed that the existing physical sciences could explain more or less all the natural phenomena. Under this Western influence, Sir Sayyid Ahmad Khan (d. 1898), the famous Muslim figure of India, suggested that prayer or supplication to God about any matter could not be fulfilled in an ob-

jective manner because such fulfilment would interfere with the fixed laws of nature and cause chaos in the physical world. On the same basis, Sir Sayyid also rejected the occurrence of "miracles" at the hands of God's elect. In reply to these views, Hazrat Mirza wrote a book in 1893 entitled *Barakat al-Dua* (Blessings of Prayer), in which he explained that the fulfilment of prayer or occurrence of miracles, which may breach man's known laws of nature, was actually in accordance with Divine Wisdom, and other laws of nature known only to God at the time.

When Hazrat Mirza wrote this reply, the scientific world held the same view as Sir Sayyid, yet only two years later a "revolution in physics broke out abruptly...with moments of unexpected discovery like that of X-rays and radio-activity in 1895-96." (*Science in History*, p. 518).

This "revolution" disclosed new realms, such as the sub atomic world, where classical physics, based on Newton's laws, broke down and did not apply. Thus it was seen that the physical sciences which were thought to have reached perfection and universal applicability, and whose laws and principles could not be infringed through prayer or Divine miracle, were inaccurate, insufficient, and even totally erroneous

in certain new situations. The hand of God can clearly be discerned in this development following so closely the *Barakat al-Dua* by Hazrat Mirza.

The above quotation from *Science in History* shows, that major discoveries leading to the "revolution" in physics were accidental. One of these fundamental discoveries, namely, that of radio-activity or atomic radiation itself, which surely must rank as a great historic discovery, it is recorded that the discoverer, Bequerel, "might just as easily" have chosen a different substance to test in his investigation and "the discovery of the phenomenon of radio-activity and all it meant for atomic physics might have been delayed for another fifty years" (p. 523). This further shows that the downfall of the supposed laws of nature based on classical physics, at that particular juncture, only two years after Hazrat Mirza's book was an extra-ordinary and unusual event—Divine intervention, in fact.

Hidden Knowledge revealed to man

The writer of *Science in History*, referring to the accidental nature of the discovery of radio-activity adds :

"Who knows how many equally simple phenomena capable of revolutionizing our science now lie hidden around us?" (p. 523). In other words, fundamental

scientific discoveries are essentially simple things, but the problem is in finding them out because they are "hidden". The Holy Quran says in this connection :

"And with Him (God) are treasures of the Unseen; none knows them but He" (6 : 59).

So the history of scientific discoveries bears out this statement of the Holy Quran.

Another relevant verse of the Quran runs :

"And there is not a thing but with Us (God) are the treasures of it. We send it down not but in a known measure" (15 : 21). This verse really sums up the history of scientific inventions in one sentence : in every thing around us there are treasures, of knowledge, of wealth, of wisdom, but they are disclosed to man only in accordance with a strict Divine "measure", not haphazardly or all at once. So we find that, in every age, many discoveries are made accidentally, without human pre-planning or much effort. Yet, on the other hand, there are also phenomena man tries very hard to investigate or exploit, but he goes on trying for years without success (an example is 'controlled nuclear fusion', which has given promise of abundant energy for over thirty years).

Commenting on the above verse in

his book *Izalah Auham* (1891), Hazrat Mirza has applied it to the disclosure of fresh Quranic truths in every age. He writes that, just as in every age there are new ideas, philosophies, and sciences, so are new and previously-unknown truths disclosed from the Quran according to the needs of the particular age. This principle expounded by Hazrat Mirza shows the Holy Quran to be a *living Book* for all times.

Just as nature discloses its secrets with time, though they have been there from the beginning, so does the Quran gradually give out its hidden treasures though its words are the same as they were 1400 years ago.

Inventions and Spiritual realities

The last point we note about modern inventions is that they bear a relationship to the spiritual truths and principles taught by the Holy Quran. It says :

"And He has made subservient to you all that is in the heavens and the earth. In this surely are signs for a people who think" (45 : 13). Man's control and exploitation of the world around him, therefore, contains "signs", by which in the Quran is meant proofs of the spiritual truths conveyed by the Holy Book.

What are these "signs"? It must first be recalled that according to the

Quran man is God's vicegerent, has been given knowledge by God, is submitted to by angels (who implement Divine commands in the world), and has the capacity of acquiring a semblance of the Divine attributes on his human scale. Thus the knowledge of, and power over nature acquired by man is a reflection of God's knowledge and power. If a person had been told a hundred years ago that man would be able to fly, go into space, transmit pictures and sound across thousands of miles, record and replay sound and motion, etc. etc., he would not have believed it possible. This is just as many today do not believe that the All-Knowing, All-Powerful Being exists. So the scientific knowledge and inventions of man, which could not have been even imagined in the past, serve as a clear argument on the perfect knowledge and power of God, and this argument gains more and more strength with the progress of science and technology.

Specific cases

Let us now look at some specific examples of inventions and their relation to spiritual truths.

Instruments such as microscopes, telescopes and radio-telescopes have disclosed the existence of entire worlds hidden from the human senses. This serves as an argument on the existence of

what the Holy Qu'ran calls *al-ghaib* — the spiritual realm imperceptible by physical senses — by revealing to man more hidden and subtle realms which he knew nothing about previously.

Cameras, sound recorders, video recorders, etc. enables actions and words to be recorded and played back. This is an argument to support the Quranic statements that a person's words and deeds are recorded in a spiritual sense, and will eventually be played back to him after death. Before the invention of sound and image recording, someone could have rejected the Quranic teaching on the grounds that it is impossible to record what a person does or says. However, God has granted man to make such inventions that serve as "signs" that deeds and words can be preserved. We note also that these devices are being used to record the actions of thieves and robbers, without their knowledge, and bring them to justice in this world.

The Holy Quran also tells us that a person's hands and feet and body bear witness as to his deeds. What is meant is that the effect of one's actions, done by the physical limbs or body, are preserved upon the corresponding 'inner' or spiritual limb, and therefore when after death only the spiritual body, made from one's deeds, remains it bears clear witness to man's deeds done during his life. As a physical proof of

this spiritual truth, God has granted man knowledge, such as that of forensic science by the use of which a person's finger-prints and even invisible marks and cloth fibres on his body bear witness as to his actions.

It ought to be noted with all these examples that the spiritual recording of deeds is perfect and comprehensive, while the physical one invented by man is imperfect and limited.

Conclusion

The great scientific and technological progress made by man in the last century, or so, has led to the notion that it is man who is all powerful and able to do and invent anything, and therefore his former belief in God stemmed from ignorance and weakness. We have

shown that, in fact man relies and depends totally on the laws of nature, which are beyond his choice and control. What is more, the history of science shows that even man's discovery of the laws he has found out is not in his control, for so many crucial discoveries were made by sheer accident, not through pre-planning or deliberation. The beginnings of atomic physics came quite abruptly at a significant time, just at the time when the "Promised Messiah" had announced that what man thought were laws of nature could be breached by higher laws known to God. Science is, therefore, taught by God, and serves to prove the spiritual truths adduced in the Holy Quran.