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for good of all.

Pārsiend

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Mr. A. D. SHROFF ON PLANNING

"Some sort of controls are necessary in planning. The only difficulty is what sort of planning we should have in the larger interests of the country because on that will depend the extent and measure of controls and regulations. In our country today controls and regulations in the interests of planned development have been carried to such a dimension that instead of helping planned progress, they are hindering development. The scale and pace of planning are detrimental to the growth of our industries".

"Comprehensive planning, as it has been adopted in our country, which means the planning of our lives in practically all the sectors of economy, is unsuited to our conditions because we have not got the tools, the basic data and the personnel."

"Socialism which arose as an ethical protest against the injustices of the earlier-day capitalism argued that concentration of economic power by the possession of huge and extensive machinery in a few hands is dangerous to democracy. Today, not only has the State come to have many weapons in its armoury to control and regulate

private capital, but technology is also leading to de-centralisation of both the mode of production and ownership of capital. For instance, electricity can be taken to the remotest villages where people can ply privately owned small machines. Shares in public companies are owned by a large number of small investors. This changing pattern of industrial ownership and diffusion of the power over the means of production frustrates the socialist ambition of concentration of all the means of production in the hands of the State. Reason and commonsense demand that we in this country make a very close study of all these trends in economic history and technological development."

— A. D. SHROFF

Founder President

Forum of Free Enterprises.

Note: Mr. Shroff had untiringly brought to the notice of the Government the dangers of inflation they were risking and a short while before his death assessed the value of a rupee at seventeen paise. The crack of doom foreseen by him has burst at last in devaluation posthumously.



EDITORIAL

This post brings you our New Year issue. Our message of good wishes to you is on cover page 2. You will get their fruits soon. You will gather them in the coming year. All the best to you and yours.

From the Gathas to Khordad Saal is a period of mixed emotions of reverence to our dear departed ones and to our holy Prophet and of somewhat complete abandon in merrymaking. Most families play some games of chance. Every game shuffled appears as a new phase of chance and so is every day of the coming year. Whatever your stars for the year say — even they cannot go all by themselves. Link yourself up with the good phases and your stars will go with you to a wide range for good. Your stars will criss-cross and annul your bad phase chances, except those linked to Fate; as in the case of Dr. Bhabha.

We have many Prophets of Pessimism to whom Prof. Nadir A. Mody, a member of the Advisory Board of Parsiana, has given an answer and suggested a way out. The way out is to take up a task and stick it out and pursue it with many a follow-up for the check up of progress or regress. That is the only way out and there is no other way. But undertakings big or small need backing of finance. Other communities with frugal habits are collecting their own finance for small undertakings. We have the standard of life mania which every day saps our resources, impoverishes us and automatically lowers that dreamy state of mind following our pet mirage.

However if something has to be done we shall do it with Zoroastrian Cooperative Finance Corporation suggested by Mr. Jehangir F. Shroff (another member of the Parsiana Advisory Board), who has shown the distinction between a Cooperative Finance Corporation and a Cooperative Credit Bank (see p. 29) With all this pep talk the picture is not altogether rosy.

Our rich have already done much for the community and now it is our middle class, who are expected to do whatever needs to be done for our poor and the down-trodden, whose gloomy picture of their monthly income of Rs. 20 is recorded by Prof. Mody. If the proposed Finance Corporation is established it will be the duty of all members of the community, rich and middle class to offer their share to it as their investment. We are reaping the ugly fruits of indiscriminate charities. Let us once again be re-organised as a business community that we once were, and draw more and more of our talented white collar men into it, who may be rotting as head-clerks in offices and foremen in workshops. How can man see the evil and pass by unconcerned ?

આ માનવી શા કામના
જે માનવી દુષણ યુવે
આ માનવીના કામ શા
જે માનવી બુધણ યુવે.

(સાંજ વર્તમાન)

What good are men who just see evil ?

What purpose have they who lose dignity of life ?

Despite some disparaging outlook we know that there are always bright stars in the firmament behind the dark clouds. They will twinkle bright when dark clouds disperse.

In the last year we have lost several bright stars of our community, who have left their indelible marks.

Dr. Homi Bhabha, Dr. R. N. Cooper, Mr. A. D. Shroff, Lady Navajbai Tata, Mr. P. Marker — all of Bombay — whose note we have taken before.

In this issue we reprint the last speech of Dr. Bhabha in which he explains his task and his trends. We also print the last speech of Dr. R. N. Cooper which he delivered in the Medical Congress at the Taj Mahal Hotel after which he got his fatal attack of coronary thrombosis to which he succumbed within three days. Further, we reproduce some excerpts from the speeches of Mr. A. D. Shroff together with a short note which show his foresight as an Economist in High Finance. We are thankful to the Forum of Free Enterprise and Mr. P. C. Hansotia for supplying them to us.

Mr. Dara Keeka who died in Dodoma, Tanzania, was a real link between Parsis and people of the soil.

Brigadier Master, Lt.-Col. Tarapore, Flying Officer Bunsu and Capt. Engineer laid their lives in the cause of their country. "Dulce et decorum est pro patria moris" (It is sweet and decorous to die for one's country)

Mr. Pheroze Antia who strictly speaking died in the previous year on 8th August, 1965 was resurrected by the performance of his first full-length play — *બેરબોની પદા* — which was vivified by Moti (Mrs. Moti Pheroze Antia) wife of the playwright and comedian taking prominent part in it along with his companions in the theatrical art of giving joy to innumerable hearts. Do good acts and good actors ever die ? We now think of one and all who have played their part to a finesse and departed, we know not where !

અતમ સાલ થાય છે — જુઝાચો દીપક,

શું ખરેખર દીપક એ જુઝાઈ ગયો ?

દીપક જે જુઝાચો છે એટલી ઉપર

તે ચીનવત ઉપર જઈ રોશન થયો.

“ મીનો ” થઈ તાલુકા પુછે છે સવાલ,

શું દીપક ખરેખર જુઝાતો હશે ?

દીપક કેમ રોશન થયો તે કહે,

જુઝાવાની વાતો પછીથી થશે.

(પારસી આવાજ)

We thank Mr. Adi Contractor for Colour blocks of picture of Zoroaster on cover page

DAENA-DIN & DEVAS

(AN EXPOSITION)

By: ERVAD RATANSHAH RUSTOMJI MOTAFRAM, M.A.

n Avesta the word for 'Religion' is DAENA and in Pahlavi DIN. Both of these are derived from the original Avestic stem 'di' — to see. DAENA or DIN is what eye of the mind sees and hence it means "what is revealed". In Avesta the religion of Zarathushtra is spoken of as 'DATEM ZARATHUSHTRI' meaning 'the Laws of Zarathushtra'. The Religion of Zarathushtra teaches the laws of material and spiritual life, the immutable laws governing the universe known as 'ASHA', the laws of keeping the four primordial elements of the material world (fire, air, water and earth) pure, and a host of other laws which all are as revealed to Him and propagated by Him as the Religion. The word 'revealed' elicits the true meaning of the word DAENA or DIN.

The only nask or the book of the original Avesta all complete extant to-day is VI-DAEVO-DATA that is 'The Laws against the Devas or the Demons'. It is significant to note this title in connection with the development of the Religion of Zarathushtra which is also referred to as DATA VI DAEVA ZARATHUSHTRI, that is, 'the Laws of Zarathushtra against the Daevas' (Vendidad 19-16, Yasna 2-13, 25-6 and so on)

The Word DEVA

The word DEVA is originally derived from the Aryan stem 'div' — to shine. In the beginning the ancient Aryans worshipped the luminous heavenly objects, which they termed 'Devas'. As time passed, they recognised various spiritual divinities by the name 'Deva' and worshipped them as independent gods.

Among the ancient Greeks, Romans and other tribes of the great Aryan stock we find the words ZEUS, DEOS, DEUS, TEUS, DIEWAS etc. used to designate their spiritual gods. All these words are allied to the original DEVA.

'DEVA' in wider sense

Again, in Sanskrit we find the following definition of DEVA:

"DEVO DANADVA DIPANADVA DYAUTA-NADVA DYUSTHANO BHAVATITI VA"
(NIRUKTA)

"Devas are they who are the givers of alms, givers of light, givers of illumination and are in the position of power or force".

The above definition is too comprehensive and embraces within its compass all the spiritual and material objects, animate or inanimate, which could offer something for the good of mankind and thus they all were known as Devas. Thus, the mountains which give us stones, the rivers which give us water, the Earth which gives us minerals and precious stones, the heavenly bodies which give us light — all these were recognised Devas. In the household the parents and in the school the teachers who occupy the position of power, were honoured and considered as Devas. (ACHARYA DEVO BHAVA, PITRA DEVO BHAVA MATRA DEVO BHAVA — UPANISHAD)

Zarathushtra raises his protest

When some of the sections of the Aryans worshipped the forces of nature, as personified Devas, as independent all powerful gods (like Agni, the god of fire, Varuna, the god of sea,

Indra, the god of lightning and so on) Zarathushtra raised a vigorous protest against this movement aiming at polytheism and denounced all the Devas. He now preached his religion in opposition to them, and which has, ever since, been known as DATEM VIDOYUM ZARATHUSHTRI that is, Zarathushtra's Laws against the Devas.

All evil embodied in the word

DEVA

But this was far from enough. Zarathushtra encompassed all physical and moral evils and extremes of all descriptions in the word DEVA, and sounded a clarion call to carry on a constant crusade against Devas of all kinds.

Through the influence of this teaching the Iranian nation emerged from the constant fear of Devas around. They developed courage and it gave the country of Iran a sort of solidarity which enabled it to rise thrice over to great power.

By now the word DAENA-DIN with all its implications must be clear. To recapitulate — the word DAENA or DIN means 'what is revealed' viz. doctrines, precepts, laws of divinity and laws directed against the Devas.

The most exact definition of
DIN

But by far the most explicit definition of DIN is given in BUNDAHISHN, (ch. I. 29) one of the most important Pahlavi works now extant. It runs thus: CHI-ASH ASAR KARP HACH ASAR ROSHNIH FRACH BREHENIT, DAMICH HAMAK ANDAR ASAR KARP BE DAT ASAR KARP ZAMAN SACHISHN YUTAK BUT. HACH ASAR KARP AHUNAVAR FRACH BUT MENOK I YATHA-AHU-VAIRYOK KE-ASH BE DAHISHNIH UT FRAJAM I DAM HACH-ASH PETAK HAST DEN CHIGON DEN APAK DAM DAHISHNIH DAHI-HAST".

"He (Ohrmazd) fashioned the Endless Form from Endless Light. He created all creations also within the Endless Form. The Endless Form was distinct from the passing of time. From the Endless Form Ahunavar came forth and the spirit of YATHA-AHU-VAIRYO, therefrom

revealed the producing and the end of the creation. This is Religion (DIN) because this religion is given alongside the rise of creation".

Religion (DIN) is, here, shown to be co-eval with the Logos (Ahunavar). As stated in yasna XIX-I. Ahunavar existed even before the creation of the sky, the water, the earth, the animals, the vegetation, the fire and the holy men and holy women. The Logos (Ahunavar) revealed the plan of the creation and its end, and this itself was the Religion (DIN), for, as stated above DIN or Religion was created simultaneously with the producing of the creation and will last till end.

*Religion (DIN) as statement of
facts of the universe*

'Revelation', as the most important implication of the word DIN, is fully elicited here. Religion (DIN), is, here, divested of all the preter-natural and mythological appendages. It is brought in line with facts of the universe — how the creation came into existence, and the progress of creation according to certain eternal principles — all based on Ahunavar, the primal Zoroastrian Logos.

Mark, too, what is said in the SELECTIONS OF ZATSPARAM ch. I, another important Pahlavi work, we possess to-day. Thus "AHUNAVAR SE ADVENAK APISH NAMUT. FRATOM KU HAR CHISH AN FRARON HORMAZD KAM DITIKAR EN KU KE AN KUNET

OHRMAZD KAM. SITIKAR NAMUT KU XVATAYIH I OHRMAZD APISH ABZAYEN-ET I O DRIGUSHAN VICHARIHET PETYARAK OMANDIH"

"In Ahunavar He (Ohrmazd) showed three things — first, will of Ohrmazd second, that he who performs the will of Ohrmazd his are the recompense and reward, and he who does not perform the will of Ohrmazd, his are punishment and retribution..... third, it showed that he prospers the sovereignty of Ohrmazd, who solves the problem of misery of the poor".

ANY WAY YOU PLEASE

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PLEASE YOU

DIN or Religion, in fact, expatiates on these fundamental eternal principles by way of doctrines and rules of every description as propounded by Zarathushtra and revealed to Him by Ahuramazda, to use the Avestic expression "MAZDO FRASASTA ZARATHUSHTRO FRA-OKHTA" (yasna I).

*Religion (DIN) in existence from
times immemorial*

It is common to associate different religions with their respective prophets, but DIN or Religion, as aforesaid, appeared when the plan of the creation was revealed through Ahunvar, the Zoroastrian Logos. Thus Religion or DIN is eternal, as we read in BUNDAHISHN ch. 1-2 "OHRMAZD UT GAS UT DEN UT ZAMAN I OHRMAZD UT HAST UT HAME BAVET" that is, "Ohrmazd and space and Religion (DIN)

and the time of Ohrmazd were and are and will ever be".

Let us, now, fully appreciate our DIN or Religion. The universe is governed and sustained by the eternal laws ever since its beginning but not understood in dark periods of history and not fully comprehended. Then realisation dawns upon mankind and the prophets of God, out of their unbounded mercy for humanity, make their appearance on this mundane sphere. Zarathushtra was first of such prophets who revealed through his DIN the eternal principles which have ever since stood the test of time and are acclaimed by the learned of all times and supported by the most modern thoughts. These laws and principles are revealed by DIN. They are "eternal verities", which man cannot shake off nor can time wear off their edge.

INDIAN SCIENCE

TWO METHODS OF DEVELOPMENT

DR. HOMI J. BHABHA

The late Dr. Bhabha was not only an eminent scientist; he made a great and significant contribution to the development and maturity of Indian science, particularly in the field of atomic science. His views, based on rich practical experience, on the manner of developing Indian science and technology should be found most interesting. The following is based on his speech to the International Council of Scientific Unions, in January 1966 and may be considered his last testament on this major topic of general interest to Indian scientists in particular and to Indian citizens in general. —Editor of RADICAL HUMANIST.

HIS talk on science and the problems of development is based mainly on our experience in India during the last 20 years. It is interesting to note that practically all the ancient civilizations of the world — Persia, Egypt, India, and China — were in countries which are today underdeveloped. *What the developed countries have and the underdeveloped lack is modern science and an economy based on modern technology.* The problem of developing the underdeveloped countries is therefore the problem of establishing modern science in them and transforming their economy to one based on modern science and technology. An important question which we must consider is whether it is possible to transform the economy of a country to one based on modern technology developed elsewhere without at the same time establishing modern science in the country as a live and vital force.

Science has formed part of the activity of Indian universities for many decades and Government itself has had some scientific departments, like the Geological Survey of India and the India Meteorological Department, for quite some time. Indian scientists such as Raman, S. N. Bose, Saha and several others have made important contributions to the progress of science, which are now part of the fabric of modern science. But science as an organized national activity has been given an important place in the national life only since independence, thanks primarily to the vision and powerful support of our late Prime Minister, Jawaharlal Nehru, though some steps in this direction had already begun to be taken a little earlier, as, for example,

by the establishment of the Council of Scientific and Industrial Research and the Tata Institute of Fundamental Research.

Debt to Nehru

I think it only appropriate that I should recall at this stage the immense debt that Indian science and scientists owe to Jawaharlal Nehru. Science was an essential, indeed basic, component of the India which he sought and worked so hard to build. "It is now patent," he said, "that without science and technology we cannot progress." *He saw the essential role of science in its historical perspective, not only in transforming the material environment, but in transforming man.* To give only one more quotation: "Science has developed at an ever-increasing pace since the beginning of the century so that the gap between the advanced and backward countries has widened more and more. It is an inherent obligation of a great country like India, with its traditions of scholarship and original thinking and its great cultural heritage, to participate fully in the march of science, which is probably mankind's greatest enterprise today."

If a scientific outlook is to be made a part of the mental makeup of every individual, then clearly his education has to be moulded accordingly. Not only must science be taught at the secondary school stage, but his scientific education must commence much earlier with the help of scientific models and toys. But to be able to do this implies that scientific teaching and research at the universities must be strengthened and expanded. The universities are, however autonomous organizations, jealous of outside interference, and the process must necessarily be

slow and time consuming. It is probably for this reason that it has been considered expedient in many countries to set up national research laboratories and other scientific organizations for specific subjects.

Achievement of the aim of establishing science as an important activity has been attempted in India through a number of governmental and quasi-governmental organizations working more or less independently, the most important among these being Atomic Energy, the Council of Scientific and Industrial Research, and Defence Science. The methods followed in *all these have been different*, and it is therefore instructive to take up the two largest of them—namely, Atomic Energy and the Council of Scientific and Industrial Research—as case studies, to see the advantages and disadvantages of the different methods they have pursued. These two organizations are approximately of the same size, Atomic Energy being somewhat larger in the total number of scientific and technical staff employed and in the total investment.

Council of Scientific and Industrial Research

The Council of Scientific and Industrial Research may be taken as the first planned attempt on the part of Government to establish a broad base of scientific and technical research in the country, particularly with a view to helping industry and industrial development. I would like to pay a tribute to the memory of my friend and colleague, the late S. S. Bhatnagar, thanks to whose enthusiasm, energy, and dynamic personality a large number of national laboratories were established within a period of some 7 years. His successors, Professor Thacker and Husain Zaheer, have carried forward his work with energy, and the Council of Scientific and Industrial Research now has some 25 laboratories under it, distributed throughout the country. In order that it should be free from the automatic application of all the government rules and regulations, the Council of Scientific and Industrial Research was established from the beginning in the form of a society with a governing body, nominated by the government, which included important ministers and officials, several of the leading Indian industrialists, and noted

scientists. One of the main advantages of this setup has been that the Council of Scientific and Industrial Research has been freed from recruiting its staff through the Union Public Service Commission, whose methods are both time consuming and inappropriate for the selection of scientific and technical staff.

After independence, the prime minister himself became the president of the Council of Scientific and Industrial Research. The governing body of the council consisted initially of 15 members and today has 34, to advise the governing body on scientific matters and, in particular, on the allocation of grants to various scientists in the universities and elsewhere for specific research schemes. As I have said, the governing body took early steps to establish a number of national laboratories and central research institutes. The first among them was the National Physical Laboratory, whose construction in New Delhi was started in 1947 and which was inaugurated in 1950; the National Chemical Laboratory, likewise inaugurated, at Poona in 1950; the National Metallurgical Laboratory in the steel city of Jamshedpur in 1950; and so on.

The plan was usually drawn up on the basis of the work of similar laboratories abroad, divided into divisions and sections, and an estimate of the staff required was made on this basis. An attempt to fill the posts was then made, through advertisement, and through invitation also in the case of the seniormost appointments. While this method of setting up a laboratory might give reasonably satisfactory results in a developed country in which science is already an important activity and in which a large number of scientists already exist in the universities and in other public and private laboratories and research institutes, it has serious disadvantages in a country in which organized science is still in its infancy and the number of available outstanding scientists is limited. Either it results in

an outstanding scientist being taken away from a university or another research institute, or it results in a mediocre one, satisfying the so-called minimum qualifications, being appointed to a post requiring originality, initiative and leadership. As we all know, the so-called minimum qualifications laid down for a post have little meaning in a research institute, and usually result in the floor becoming the ceiling.

As result of following this method has been that a number of good scientists have been drawn away from the universities into the national laboratories, leaving the universities weaker thereby. Thus, for example, the late K. S. Krishnan, who was then professor of physics at the Allahabad University, was taken as the first director of the National Physical Laboratory, a successor has been obtained by taking a professor from the Banaras University, weakening the universities by the drawing away of some of their good people—their most valuable asset.

I must emphasize that these critical remarks are in no way aimed at individuals but at the system. The standard method of planning laboratories and filling posts is often forced on many by the administrative and financial requirements of Government. As Professor Blackett has said, "We must endow ability whenever it is found, and we must guard against subsidizing mediocrity."

Atomic Energy

I turn now to Atomic Energy for a case study of a scientific organization which has been built up by an entirely different method, a method which might be described as "growing science". An Atomic Energy Commission was established in 1948 in the Ministry of Natural Resources and Scientific Research to survey the territories of the Indian Dominion for the location of useful minerals in connection with atomic energy, to promote research in the ministry's own laboratories and subsidize such research in existing institutions and universities, and to take such steps as might be necessary from time to time to protect the interests of the country in connection with atomic energy. Its decisions were implemented through the Ministry of Natural Resources and Scientific Research. Instead of planning

a number of new laboratories, the commission decided to use the existing institutions to do the preliminary scientific work and to develop the scientific personnel that would be needed. Foremost among the institutions so used was the Tata Institute of Fundamental Research, and the history of atomic energy in India during its initial stages is so bound up with this institute that it merits special consideration.

Tata Institute

The Tata Institute of Fundamental Research was founded in 1945 as a joint endeavour on the part of the Sir Dorabji Tata Trust and the then Government of Bombay, on the initiative which I took in 1943, when I was a professor at the Indian Institute of Science at Bangalore. At that time there was no scientific institution in the country which had facilities for original work in subjects at the frontiers of knowledge in physics—in particular, nuclear physics, cosmic rays, and high energy physics. I accordingly pointed out to J. R. D. Tata that "the lack of proper conditions and intelligent financial support hamper the development of science in India at the pace which the talent in the country would warrant," and suggested that the Tata Trust might take the initiative in setting up an institute for fundamental research. I also pointed out, in a letter dated 12 March 1944, that "when nuclear energy has been successfully applied for power production in, say, a couple of decades from now, India will not have to look abroad for its experts but will find them ready at hand." The trustees of the Sir Dorabji Tata Trust decided to accept the proposal and financial responsibility for starting the institute in April 1944, more than a year before the explosion of the first atomic bomb on Hiroshima and before nuclear physics had become what might be called the "bandwagon" of science. This was also before it had been made public that atomic piles had been successfully operated and long before there was any talk of atomic power stations.

Bombay was chosen as the location for the institute, as the then Government of Bombay was interested in expanding and improving the level of research work in physics, so it became a joint founder of the institute. This is perhaps the appropriate place to mention an important

difference between the Tata Institute of Fundamental Research and all except a couple of the national laboratories of the Council of Scientific and Industrial Research—namely, that this institute has been a constituent recognized institution of Bombay University from the very beginning and has had close relations with many other universities in India, so that students of many of them have done work for the Ph.D. at the institute.

No organizational chart of the future development of the institute was submitted either when it was founded or later, and the philosophy has always been to support ability whenever it is found in the fields of work covered by the institute. Indeed, the philosophy underlying the founding of the institute was the same as that underlying the Max Planck Institute in Germany: "The Kaiser Wilhelm Society shall not first build an institute for research and then seek out the suitable man but shall first pick up an outstanding man, and then build an institute for him." The institute received financial support from the Government of India from its second year, through the Council of Scientific and Industrial Research and the Ministry of Natural Resources and Scientific Research. While the recurring grants from the Tata Trust and the Government of Maharashtra continue, and indeed have been increased, the main financial support for the institute comes today from the Government of India through the Department of Atomic Energy, the Government of India having undertaken the permanent responsibility of supporting the institute in 1955. The recurring budget of the institute during the first year was only 80,000 rupees; this was increased steadily at about 30 per cent per annum during the first 10 years, and since then has increased at about 15 per cent per annum, till the current year's budget is 15 million rupees (3 million dollars), making this the largest national laboratory in the country with the sole exception of the Atomic Energy Establishment at Trombay. Since not a single senior post has been filled by obtaining a professor or senior scientist from a university or from other research institutes in India, the growth of the institute gives an indication of the rate at which it is possible to develop scientific research in the country through growing

one's own people and through absorbing those returning from studies in universities abroad. The institute has made a special point of growing scientists and has now reached the stage when it is able to feed good scientists into the universities, a policy which will be followed to an increasing extent in the coming years.

In addition to supplying people at professional level, the experiment is being tried of sending small and integrated groups of two to four research workers into the universities together with the equipment necessary for their work. The university has to undertake to provide them space and treat them as members of its own staff, and it may require each one of them to give not more than two courses of lectures per year. The group is of course selected by mutual agreement, to be engaged in a line of work which the university wishes to develop. At the end of the 2-year period the university will be free to absorb the group permanently, and, reciprocally, the members of the group will have the option of being so absorbed or of returning to the institute. It is expected that these groups will form the nuclei for building up larger schools of research in the universities.

The institute started work in 1945 in 6000 square feet (540 square meters) of hired space in an existing building. By 1948 its work had grown to such an extent that it was moved to 35,000 square feet of hired space in the building of the Old Bombay Yacht Club, and it was only in January 1962 that the new buildings of the institute were inaugurated by the late prime minister, some 16 1/2 years after the institute was founded. This is another noteworthy respect in which the growth of the institute differs from the growth of the Council of Scientific and Industrial Research laboratories. Work has inevitably been built up first and the permanent building has come afterwards, and this pattern has been followed also in the development of the whole atomic energy program.

Before I leave the institute it may be of interest to give two more examples of building projects and development around people. As early as June 1944, Sir A. V. Hill had written to me suggesting that biophysics was a neglected subject in India and that it should be taken under

the wing of the institute. While I agreed with his suggestion, I did not think that it would be wise to embark on this line till someone had been found, who was mature enough to be able to work on his own and build up a group. When, however, in 1962 my attention was drawn by the late Leo Szilard to a very promising Indian molecular biologist, it was decided to start work in microbiology—work which has since then been growing very satisfactorily.

Another example is provided by the Radio-astronomy Group. Four Indian radio astronomers had jointly written identical letters to the chairman of the University Grants Commission, to the director general of the Council of Scientific and Industrial Research, and to me as the chairman of the Atomic Energy Commission, offering to return to India as a group and establish radio astronomy here, if facilities and support could be given to them. When it had been ascertained that the members of the group had considerable original work to their credit and were of sufficient maturity to be able to work on their own in India, it was decided to take up radio astronomy at the institute. Thirty-two parabolic dishes presented by the Commonwealth Scientific and Industrial Research Organization of Australia, which had been lying unpacked for several years at the National Physical Laboratory, were handed over to the institute through the willing co-operation of Husain Zaheer, and these have been installed not far from Bombay for solar radio-astronomical work. In the meantime a project has been developed based on the use of a large cylindrical radio telescope for studying quasars and other radio sources and locating them accurately by lunar occultation. The telescope, which will have four to five times the collecting area of the Jodrell Bank instrument, will be designed and built entirely by Indian scientists and engineers and is expected to be in operation within 2 years. A site for it has been selected after a very extended study, as the axis of the telescope, which is 1700 feet (500 meters) long, has to be parallel to the axis of the earth. Work on the site at Ooty has already started. It is proposed to make this radio telescope one of the centres for inter-university work.

To return to atomic energy, groups were established at the institute to design and build all the electronics instrumentation without which atomic energy work is impossible. Thus, the Physics Division and the Electronics Division of the Atomic Energy Establishment at Trombay were both initially housed and built up in the institute. The electronics group of the Atomic Energy Establishment has today a staff of over 1300 people and is the strongest research and development group in electronics in the whole country.

Trombay

I now turn to the Atomic Energy Establishment at Trombay, which is today by far the largest scientific centre in the country, with a total staff of some 8000 persons, of whom nearly 1800 are professional scientists and engineers and another 3000 technical staff, many of whom, such as scientific and technical assistants, are science graduates. This establishment has grown like the institute, depending on the ability of the various groups to expand fruitfully. At no stage was an organizational chart drawn up, projecting the future pattern of the establishment. Only the broad lines of work were laid down, and major projects considered and approved. Thus, within a broad overall policy, the maximum freedom was given to members of the staff to display initiative in picking fruitful lines of work and in developing new ideas. The emphasis has been throughout on developing knowledge indigenously and on growing people able to tackle the tasks which lie ahead. The generation of self-confidence and the ability to engineer and execute industrial projects without foreign technical assistance have been major objectives.

It was decided early in 1955 to build a reactor of the swimming-pool type. The basic design was frozen in July of that year, and the entire reactor, including the building for it, was designed and built entirely by our own scientists and engineers in just over a year, only the fuel elements which contain enriched uranium being supplied by the United Kingdom Atomic Energy Authority. The reactor became critical for the first time on 4th August 1956 and was the first reactor in Asia, apart from any the U.S.S.R. may have had in its Asian territories. This reac-

tor was designed and built by us at a time when most European countries, except of course the United Kingdom and France, were buying their first reactor from the United States. The successful completion of this reactor gave our staff a great deal of confidence, and it was an invaluable facility around which the research and development of the project was built during the following few years. The control system for this reactor was built by the Electronics Division in some old wartime hutments on the site of the Tata Institute of Fundamental Research and gave trouble-free operation for 4 years till the reactor was shut down in 1960 for overhaul, maintenance, and repairs. At that time advantage was taken of the shut-down to install an improved control system, and a comparison of the control-rod drives and shut-down mechanisms installed in 1961 with those originally installed will show the advance that had been made by the Reactor Control Division in its engineering capabilities. The important fact remains, however, that the original control system, even if more cumbersome and less elegant, gave trouble-free service for 4 years, and the confidence gained in "doing it oneself" fully justified the course that had been followed. It may also be remarked in passing that this reactor, built by our own people, was in operation 2 years before the first reactor in China, which was designed and built by the Soviet Union.

We were looking around for a suitable design of reactor for carrying out engineering experiments on the design of future power reactors when we received an offer from the Canadian Government to build a reactor of the NRX type at Trombay. As this reactor suited our needs, the generous offer of the Canadian Government was accepted. The CIR being a Canadian gift under the Colombo Plan, all parts of it came from Canada, and the erection, though a Canadian responsibility, was carried out jointly with our staff. Although the total number of engineers and skilled artisans engaged on the construction of the CIR rose at one stage to as many as 1,200, the maximum number of Canadian personnel at any given time at Trombay never exceeded 30. Indian welders had to be trained in the special welding techniques required, and

all welds were radiographed. Similarly, Indian engineers participated in the erection of the reactor under overall Canadian supervision. I must say here, in appreciation of the Canadian concept of this cooperation, that when the project was decided upon they asked us to send some 40 scientists and engineers immediately to Chalk River to be trained in the operation and maintenance of the reactor, and it was most of these, as well as others, who were able to participate, on their return, in the construction of the reactor.

The decision to build a uranium metal plant was taken in May 1956, construction was started in December 1957, and the first ingot of atomically pure uranium was produced in January 1959, the plant having been designed entirely by Indian scientists and engineers and built in about a year. Similarly, the fuel fabrication facility was also designed and built entirely by our own staff, and it produced the first fuel element in June 1959. The production of fuel elements is generally considered a rather difficult and tricky operation, and the successful production of nuclear-made uranium metal and metallic fuel elements from it at a time when there were only about half a dozen countries in the world producing their own fuel elements added further to the confidence of our staff in their ability to undertake difficult tasks.

The economics of the operation are also noteworthy. When CIR is in full operation, it is enough to keep it going for less than a year, that more than compensates the total foreign-exchange expenditure in setting up this plant. (The article then gives more scientific matter regarding achievements in Atomic Energy Section and electronic plants for manufacture of necessary instruments and planning and designing successfully Atomic Power Stations and Thermal plants.)

An interesting example is also worth noting. While carbon resistors are being made by a couple of commercial firms in this country, with foreign collaboration, these are of commercial grade and have not passed the stringent tests required for atomic or defence equipment. On the other hand, the carbon resistors developed entirely by our own efforts at Trombay have

met these stringent defence specifications and will now be produced in quantity to meet the requirements of the country as a whole. If a more complex variety of an object can be developed purely by indigenous scientific and technical effort, there is clearly no reason why production of a simpler variety should require foreign collaboration. The fact that foreign know-how had to be obtained for making commercial-grade resistors clearly emphasises the fact that the policy followed in setting up industrial enterprises has been misguided, and that much more self-reliance should and could have been aimed at.

Technical Physics Division

There are many other examples of what might be called "technological fallout" from our atomic energy program which will benefit the industry generally. The Technical Physics Division has developed many different pieces of equipment needed for atomic work, which can be brought off the shelf in industrially advanced countries. The result is that we have been able to develop and make equipment, needed in the country, which has nothing to do with atomic energy directly. For example, a result of developing the vacuum technology of oil-diffusion pumps is that we have been able to make equipment for freeze-drying blood plasma on the one hand and for freeze-drying food and pharmaceutical material on the other. There are a very large number of other examples of this type.

Training Program

Additions to our scientific and engineering staff have been at the rate of between 150 and 250 per annum. To meet this requirement, the Atomic Energy Establishment, in cooperation with the Tata Institute of Fundamental Research, has run a Training School in which about 150 persons have been admitted per annum.

On admission, these young men become part of small scientific groups working on specific problems, and at the end of 2 or 3 years they become very useful scientists. The best among them are likely to become the future leaders.

We have found this method of recruitment very satisfactory, and although it has placed a heavy load on our senior staff by making the spectrum of our scientific staff much heavier at the junior levels than it should be, it has provided a powerful source of able young scientists, on the basis of which the program can be expanded continuously in the future. It will be seen, also, that this method of building up our staff does not drain away senior persons from the universities but, on the contrary, gives training, employment, and opportunities to young graduates of the universities.

To summarize, of the two ways of establishing science as a national activity in an underdeveloped country — the standard method on the one hand, and the alternative method of what I have called "growing science" on the other — the second seems to lead to better results in the end, with greater potential for continuous growth. While it may seem much slower and harder at the beginning, it has the capacity for continuous growth and for developing the people it needs, and its faster growth rate in later years more than compensates for the slow beginning. Moreover, it may lead to concrete results sooner than the other method in developing countries, in which there is not a large pool of mature scientists to draw from.

Industrial Development

Indian industrial development has so far proceeded almost exclusively on the basis of setting up plants and industries with foreign collaboration. Our own experience makes it quite plain, however, that this method can never lead to a self-generating industry without simultaneous establishment of a powerful scientific research and development effort to support it. A few examples will make this plain.

The steel industry has existed in India since the First World War, and one of the two steel plants was among the largest in the British Commonwealth in the early 1920's. Yet, when these steel plants had to be expanded, it was necessary to draw upon foreign consultants and engineering firms to plan and carry out the expansion. The government established a steel plant in the public sector at Rourkela, with German consor-

tium, had to be asked to undertake the job. at Bhilai, with Russian technical collaboration. at Durgapur, a British consortium, and essentially the same method is being followed in the case of the fourth public-sector steel plant, at Bokaro. Thus, the construction and operation of a number of steel plants has not automatically generated the ability to design and build new plants. Unless powerful scientific and engineering group are established during the construction and operation of existing steel plants as a matter of deliberate policy, the dependence on foreign technical assistance will continue, and the steel industry will not reach a stage of technical self-reliance. A similar situation exists in almost every other industry.

Foreign collaboration can certainly lead to a quicker take-off. An example from the atomic energy field will make this clear. As I have already indicated, we have designed and built our own research reactors since 1955. However, when economic studies showed that, in many areas of the country remote from the coalfields, atomic power stations could be competitive with conventional stations, we invited tenders, on a world basis, for the supply and erection of the nuclear power station at Tarapur, with only broad stipulations regarding certain of the technical requirements. The reason for the course is that no country has ventured to build a large power station of 400-megawatt capacity without building first a 5 to 50-megawatt prototype. The prototype takes as long to design and build as the large power station, so that, if we had chosen to build our atomic power stations without external technical assistance, it would have taken us some 4 years to develop and build a prototype and another 4 years to build the full-scale station. By resorting to foreign collaboration, the first 4 years of this development have been eliminated.

The second atomic power station of 400-megawatt capacity, in Rajasthan, is based on a Canadian design in which natural uranium is used as fuel, and heavy water, as moderator and coolant. As a result of CIR, this is a type of reactor with which we have already had considerable experience. This time the Department of Atomic Energy has undertaken the prime responsibility for constructing the station, but with the assistance of Atomic Energy of Canada, Limited, and a Canadian engineering firm as consultants. The third atomic power station, at Madras, which will be of the same size and of the same basic design, will be built entirely by Indian scientists and engineers without any foreign consultancy. This clearly demonstrates that the result of having built up a very strong research and development organisation with associated engineering skills is that we have been enabled, through foreign collaboration, to "buy" some 4 to 5 years of time and to make ourselves self-reliant even in the design and construction of large atomic power stations.

Disappointment at the small return that has come from our investment in science and technology is sometimes expressed. It should be realized, first, that scientific and technological development on a broad basis involves the development of a large number of scientists and technologists and the maturing of many of them. This is a process which must inevitably take 15 to 20 years. It is only today that our investment in science and technology has reached the stage of bringing returns. The recent stoppage of foreign aid has shown our tremendous dependence on a vast variety of foreign-made materials and pieces of equipment, many of which could and should have been produced in our country long before this. We found that a very large number of these items can be produced as a result of the know-how which already exists in scientific organizations here, and steps are being taken to produce these without foreign assistance. The results will show themselves within

the next few years, and I have no doubt that the confidence which Indian technologists will gain thereby will spread to Indian industrialists and administrators, many of whom, not having any basis for technical judgments of their own, are inclined to play it safe by relying on foreign consultancy.

Many examples can be given of foreign collaboration resulting in badly engineered plants or technical mistakes, and when such technical mistakes are corrected the foreign consultant benefits from the experience. Whereas, if an Indian scientific or engineering organization had been employed, the experience gained even from initial failures would have been a gain to the country. The Soviet Union did not hesitate to follow this path. One should also remember that, in buying foreign know-how, one is paying for an element which covers the cost of research and development done by the foreign consultant, and it is clear that a more permanent benefit to

the country would result if this money were made available for supporting research and development in India.

It is my personal view, which is shared by many eminent foreign scientists, that the general absence of the proper administrative set-up for science is a bigger obstacle to the rapid growth of science and technology than the paucity of scientists and technologists, because a majority of the scientists and technologists we have are made less effective through the lack of the right type of administrative support. The administration of scientific research and development is an even more subtle matter than the administration of industrial enterprises, and I am convinced that it cannot be done on the basis of borrowed knowledge. It must necessarily be done, as in the technologically advanced countries, by scientists and technologists themselves.

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MEDICINE AND PHILOSOPHY

By

DR. R. N. COOPER, M.S. (London), F.R.C.S. (ENG.)

OCRATES, the Greek philosopher, said "By all means marry. If you get a good wife you will become very happy. If you get a bad one you will become a philosopher". Fortunately, I have got a good wife so I had no opportunity to become a philosopher and, therefore, I hesitated, as Dr. Ajgaonkar will testify before I accepted your invitation to speak on this subject.

There are three stages in the career of a consultant. During the first stage he has to work hard to acquire practice. In the second stage, he is busy day and night to meet the demands of an extensive practice that has grown round him. In the third stage, when his practice begins to decline, he either turns sour or begins to philosophize. This paper is my first attempt in the realm of philosophy.

Having been in the profession for over forty-five years, I have had the good fortune to come into contact with a sizeable cross section of humanity. I have had opportunities to watch the behaviour of men of different nationalities at some critical moments of their lives when my services were requisitioned. I have treated princes and paupers, farmers and financiers, saints and sinners, ministers and mere men. I have had, therefore, many occasions to observe their reactions to illness and to speculate how far these reactions have been coloured by heredity, environment and the mental discipline to which they have subjected themselves. Thus I have been driven unconsciously into the realm of philosophy. But after this request from Dr. Ajgaonkar, I have been seriously thinking whether your time and mine will not be wasted

in discussing medicine from a philosophic standpoint. I leave to you to be the judge. So long as we do not let philosophy cloud our medical judgment and so long as we do not indulge in fantastic speculations, I feel that a certain amount of philosophy is an essential part of our medical practice.

Philosophy forms a large component of our Ayurvedic system of medicine. There was a time in European history when medicine was closely related to natural philosophy. The results, medically, were far from satisfactory. Yet when we look at the question historically, we find that *the relation of medicine to philosophy is pretty close*. For years, it was argued whether medicine was a discipline of science or philosophy. Even today, we cannot get away from the idea. No doubt a major part of the medicine of today belongs to the realm of science. However, our concepts of health and disease, diagnosis and prognosis belong to the domain of philosophy.

Philosophers at all times have exerted a dominating influence upon the moulding of theories concerning life and health. Thus Plato, Aristotle, Descartes, Charak, Susrut and others have helped to evolve medical theories or the philosophical doctrines of their own times. We are not merely endeavouring to bring back a sick man to health but we should consider it our duty to rehabilitate him into his accustomed place in his community and society. This calls for a knowledge of sociology and psychology. Even problems of metaphysics come our way. As doctors we see the Angel of Death visiting our patients ever so often. Besides, we see so

much of misery and ill health. Thus many are the occasions when we do ask ourselves the meaning of pain, disease, suffering, life, death and the thereafter.

One of the most primitive concepts of the nature of disease is that the sick person lacks some vital thing necessary for good health. This in later times developed into the humoral theory.

Another primitive concept was that something was added to the healthy body — some foreign entity such as demon or evil spirit or some strange substance introduced through black magic. Sometimes the ghost of a dead man was supposed to have taken possession of the sick person. *Medicine probably had a triple origin — empirical, magical and religious.* Empirical medicine was founded on experience and observation. This part has progressed and is progressing through the ages. The *magical part* has nearly died down. In our country, it is still prevalent. Even among the better educated people, the belief in the "Evil Eye" still persists. The *Religious part* persisted in offering sacrifices to the God or Goddess of healing. Thus in Greece it was to the Temple of ASKLEPIUS where the sick people flocked. The pilgrimage to Lourdes is still with us. The interest shown in Christian Science by some of the elite is an evidence of the religious concept in medicine still persisting amongst us.

In primitive medicine the addition or subtraction, of something, disturbed the balanced forces of the body. The upsetting of this balance was the aetiological factor of any disease. A state of balance could be more easily upset in fluids than in solids. Hence arose the humoral theory of Hippocratic medicine. There were four humours in the body, blood, phlegm, yellow bile and black bile. The heart was supposed to be the source of blood, the brain of phlegm, the liver of yellow bile and the spleen of black bile. When the four humours are perfectly balanced there is good health. If the balance is upset there is disease. This humoral Pathology began five centuries before Christ, and strongly supported by Galen this humoral theory or philosophy persisted for two thousand

years. It was not till the Renaissance that a new society of highly enlightened men first arose in Italy and had the courage to challenge the authority of Hippocrates and Galen. Vesalius did this, so far as Galenic Anatomy was concerned in the sixteenth century. Paracelsus began to undermine the four humour theory, and in his introductory lecture burned the books of Hippocrates, Galen and others; and exhorted the student not to look upon old masters as infallible gods but to learn to build up their knowledge on observation and experience. In physiology Harvey exploded Galen.

The great physical and chemical discoveries of the seventeenth century began to infiltrate medicine. Now diseases were no more the upset of the balance of hypothetical humours. Diseases were later attributed to physical forces and chemical changes which could be reproduced experimentally in the laboratories. However, this new school made the same mistake as their predecessors had done, in respect of the humoral theory. It tried to explain all phenomena of life and disease in terms of one principle, e.g., Oxygen, electricity or irritability.

Thomas Sydenham, the great English physician theorised that disease is the battle between nature and the constitution of man against injury. His teaching had a lasting effect on the study of diseases. Excellent monographs on Tuberculosis, Apoplexy, Rickets and certain heart conditions were published during these years.

Modern pathology may be said to have begun with Morgagni (1682 - 1771). Morgagni was an anatomist in the Padua University and he published "Five books on the seat and causes of disease based on anatomical research".

Morgagni describes the disease and its symptoms as they are observed in life and tries to co-relate these with the anatomical changes he observed in the different organs during autopsy.

Vesalius, Harvey and Morgagni all worked in Padua and, therefore, the honour of breaking away from traditions and paving the way for modern medicine must be given to Italy.

I have very briefly sketched the evolution of modern medicine to show how *the philosophical part of medicine receded in the background* and how *the scientific part came into the forefront*. Before I proceed to consider the further developments that have taken place in the last thirty years, I shall pause to take up the consideration of Ayurvedic medicine.

At the outset I must state that I have great veneration for the past. Each successive generation has contributed its mite towards our modern civilization. Ours is an evolving world. Time cannot stand still. Time in its march always brings changes. We have reached a stage when we cannot do without specialists.

Ayurveda (Science of Life) is a splendid system of philosophy having a certain amount of science incorporated in it. It forms our proud and glorious heritage. According to Kawiraj D. N. Ray in his masterly book "The Principles of Tridosha in Ayurveda", medical knowledge has been handed down to us from 6th and 7th century B.C. by Agnibesa, Bhela and Susrut I. Charaka and Susruta II flourished in the 1st century A.D. This was the golden age of Ayurved. Now darkness came over the land. Adoration for the great masters hampered progress. The teacher imparted his knowledge by recitation of couplets. What was expressed in the couplets was the last word. There was no scope for reason or doubt. Thus today, Ayurveda is an enormous lake of knowledge into which weeds have been allowed to persist. The weeds will have to be removed, if we wish to see the clear water again.

So far as Science is concerned, there is only one science for the world. There can be only one Science of Astronomy or physics or chemistry for the whole world and so there can be one science of medicine for the East and the West. There is no such thing as the medical science of Russia or America or Japan. But I must admit that there can be different systems of philosophy for each country. There is room for more than one philosophy in a country. India has many systems of philosophy. These systems satisfy our spiritual needs. Let us preserve Ayurveda as a philosophy, but let us divest it of its scientific part.

For instance, the Anatomy in Ayurveda is faulty and, therefore, it would be sheer obstinacy to teach such anatomy. Kawiraj Ray admits that Ayurvedic Anatomy is faulty. But he questions, if the Knowledge of Physiology is quite essential for an ayurvedic student? He says that the physiology of western medicine is quite different from that of Hindu Medicine. The physiology of Ayurvedic medicine is the physiology of Vayu, Pitta and Kapha. I understand that physiology is a science and as such there can be only one common physiology for all countries.

How very different is the Ayurvedic concept of digestion from our ideas of digestion. Modern physiology accounts step by step for the digestion of diverse food stuffs. Each step is proved scientifically. Why persist in teaching such imaginary physiology?

Tridosha theory is the essence of Ayurvedic Pathology and treatment. This theory is too complicated to be argued in the time allotted to me.

"The Ayurvedists attribute physical disorders to an imbalance of Tridoshas viz., Vayu, Pitta and Kapha, and mental disorders to an imbalance of Sathva, Rajas and Tamas. The three Doshas are the most important from the stand point of derangement of health. While considering pathology not only must the three Doshas be considered but also the seven Dhatus or body constituents and also three mals or waste products, urine, faeces and sweat.

I have tried to understand the *Tridosha Theory* from books of Kawiraj Ray and Dr. Chanrashekhar Thakur, but I felt that I came out of the same door that I went in. It took two thousand years to explode the four humoral theory of Hippocrates. I do not know how many more years we shall have to wait, to see more of science enter into Ayurveda, and for the speculative theory to recede into the back-ground. But the supporters of pure Ayurveda refuse to admit that the microscope and the various laboratory tests are of any help in the diagnosis and treatment of diseases by the Ayurvedic system of medicine.

Ayurvedists take up the attitude that whatever is known in medicine today and will be known tomorrow is all contained within the Ayurvedic system of medicine. Such an attitude is hardly scientific. I should like to have ocular proof of Vata or Vayu. So also for Pitta and Kapha; I should like to see these substances made manifest. I should like to know how the physical properties ascribed to these constituents have been arrived at. I should like to know what is the chemical composition of Pitta and Kapha? Can these substances be isolated from the tissues in which they are said to originate? I will not be ready to accept the statement that the normal quantity of Pitta is four anjalies and of Kapha is six anjalies, unless I am shown how the calculation is arrived at. The supporters of Suddha Ayurveda maintain that Ayurveda needs no facelifting. They are definitely against any integration of the two systems of medicine. If I talk the way I do, I will be promptly told that I know neither a word of Ayurveda nor a word of Sanskrit and I have, therefore, no right to talk on this subject. But our political leaders who know neither a word of Ayurveda nor modern medicine are permitted to talk glibly about integration. *It is my considered opinion that an integration is not possible.* Leaving the Ayurvedists in their self contented position, let us consider how science marches on, taking medical science with it. But as we march on *we shall feel an increasing need of a little more philosophy in our practice.*

We realise that to understand the physiology of the human being we must understand the anatomy and physiology of the cells composing our body. In these investigations the *electron microscope has become a most promising tool.* A common staphylococcus which is like a small dot under an ordinary microscope can be enlarged to a size when it measures six inches across. This immense magnifying power of the electron microscope provides an insight into the world of micromolecules. But the study of this type requires a group of workers who are specialists in various neighbouring disciplines of medicine such as colloidal chemistry, biology, etc. Such a group succeeds in achieving results that an individual would never have obtained working on his own. Science today tries to bring to

light the chemical composition of the nucleus of the sexual cell, of its Chromosomes and of the genes that form part of the Chromosomes. This study of genes is important because the genes carry the hereditary factor which is so vital for the future of the human race. We are at present involved in a detailed study of different tissues and organs of the human body. *But we want to know man, the real man.* Is man merely a compound of chemical substances which constitute the tissues and the humours and ferments? Or is he something much more complicated as he is endowed with consciousness and intellectual powers? These intellectual powers produce a musician, a poet, a mathematician, a hero or a saint. Every person has his individuality. What is it that constitutes individuality? We should like medical and allied sciences to answer this question. *We should like to know more of the mystery of our existence, of physical and moral suffering and of the craving to know more of the great design that lies behind the creation of the universe.*

With the advent of industrialization a change has come over our methods of living and thinking. We have to live in ever increasing numbers in the big cities with their very tall and closely crowded buildings and their smokey and sooty atmosphere. You hardly ever see a clear starry night. For a very long time I have not seen my favourite constellations of stars like the Orion or the Great Bear. Every one is busy rushing about to make money and then use it to go to cinemas or clubs or restaurants so that the family reunion in the evening is becoming less noticeable. Improved sanitation and hygiene and increased surgical skill in curing congenital and acquired heart diseases and other disabilities have led to an increased expectancy of life. This has created a new problem. The number of C class citizens and jobless old men and women has increased. To maintain these people in a good condition has increased the financial burden on Society. Health conditions have improved and today the children are handsomer, taller and stronger than children about three decades ago. But the question is whether increased stature really means increased intelligence, or is the old proverb likely to prove true.

With labour saving devices and with the advent of air-conditioning in houses, offices and even workshops is it not possible that we are likely to become less hardy and therefore lose our natural powers of resistance? *Mortality from infectious diseases has fallen and we live longer to suffer from degenerative diseases* like cancer, diabetes, arteriosclerosis, coronary thrombosis and nervous diseases. Our diminished resistance to stand up to worries has led to an increase of patients with neurosis. So, today a new speciality of psychiatry has appeared and according to reports it is reaping a very good harvest !

Today, we need specialists but great harm can come by over-specialization among physicians. Modern Medicine breaks up the sick man into fragments. Each fragment is to be treated by a specialist. A specialist may study the minutest part of his speciality. However, his knowledge of the body or the patient as a whole may be so elementary that he may not be in a position to understand the implications of his own speciality. This is where a general practitioner well-versed in medicine can help the specialist to treat the patient. As we specialise more and more and "study more and more of less and less" we find that the deep compartmental knowledge gained by our specialists must be integrated in an intelligible manner by medical men with superb intellect. They will then apply the treatment to the patient. Thus I see that in some near future a difficult case will be worked upon by specialists of a hospital who will meet together to discuss their different view points. This conference will be presided over by a senior and highly intellectual physician who will put the data to practical use in the treatment of the case in question.

So far as I can see, what medicine has to face in the near future is, *whether medicine can help in the remaking of man*, a man with increased natural physical health as also mental health and a well developed moral sense. This is a gigantic problem that will require the joint efforts of medical men, educationists, biologists and economists. I feel that the dark cloud of politics which hangs over the firmament of medicine must be lifted for all time to come.

Descartes in his book "Discourse on Method" wrote "The mind so strongly depends on temperament and the disposition of bodily organs, that if it is possible to find some means which will make men generally more wise and more clever than they have been till now, I believe that it is in medicine that we should seek it. It is true that the medicine now practised contains few things having so remarkable usefulness. But without any intention of scorning it, I am confident that there is no one, even among those whose profession it is, who does not admit that everything already known about, is almost nothing, in comparison with what remains to be learnt, and that people can be spared an infinity of diseases both bodily and mental, and perhaps even the weakening of old age, if the causes of those troubles and all remedies which nature has provided us were sufficiently well known. Alexis Carrel in his book "Man the Unknown" says — "We will have to be re-oriented in our studies, if we are to undertake this gigantic task of remaking man." He writes "This superscience will be utilizable only, if, instead of being buried in libraries it animates our intelligence. But is it possible for a single brain to assimilate such a gigantic amount of knowledge? Can any individual master anatomy, physiology, biological chemistry, psychology, metaphysics, pathology, medicine and also have a thorough acquaintance with genetics, nutrition, development, pedagogy, aesthetics, morals, religion, sociology and economics? It seems that such an accomplishment is not impossible. In about twenty-five years of uninterrupted study one could learn these sciences. At the age of fifty those who have submitted themselves to this discipline could effectively direct the construction of the human being and of a civilization based on his true nature".....

Sufficient unto the day is the philosophy thereof. Before I conclude, I may say what a wit has said that "Philosophers are people who talk about something they do not understand and make you think it is your own fault if you have not understood them." So, if you have not understood me, it is your own fault !

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Historical Survey of Weaving

by

JEHANGIR FRAMROZ SHROFF

N pre-historic era human beings were existing in the same way as animals and birds, that is naked. As gradually intelligence was gained human race started becoming self-conscious and the female sex was more conspicuous in shielding their sex parts which distinguished them as of opposite sex, with tree leaves and such other natural objects. It is interesting to know that the art of weaving fabrics originated in the ancient times in savage countries like Africa and similar other backward countries. How were the savage countries the leading countries in this art? The answer is that the different birds and the spiders, the former knitting their nests in multiple designs, and the latter weaving varieties of beautiful webs gave incentive to human intelligence to copy and develop the art of weaving by human hands.

Weaver goes singing

"One of numerous Old World (chiefly African and Indian) birds Conirostral passerine was noted for the dexterity and ingenuity with which it wove the materials of their nests into a textile fabric, and also for the extraordinary size and unusual shape of some of these structures". Man having studied this natural art from birds, applied it for the welfare of human race. Now it has developed after centuries into one of the World's greatest arts and trades next to food. The human brain developed its faculty from time to time and learnt the art of matching colours and designs from the beautiful and colourful feathers of birds and such other creatures. It is a fact that weaver birds have created

weavers and, if one studies weaving in retrospect, like birds the ancient weavers were generally good singers, because the art of weaving was sedentary and as such a weaver was singing when weaving to break monotony.

According to Mr. Warbton, in the time and during the reign of Queen Elizabeth I, the Queen of England, the skilful Flemish Weavers were so much oppressed by the Duke of Alba that during weaving they were singing (Psalms).

Man takes over from birds

History states that in the year 1788 copying the Bird Oriolustextor's nests human race started weaving and knitting designs and making materials like Lungis, Stockings, etc. and marketing them. When the so-called savage people of Africa and India had developed the art of weaving from the designs of nests and birds, people of Europe were still moving about naked. In our country, the Kashmiris and people around Kashmir were the first to create looms and weave fabrics. They got inspiration from Java Sparrows and Nutmeg-birds which were skilled in making nests of excellent designs. The Kashmiris it is said were very advanced in Weaving. Such very fine beam of yarn was woven into cloth that the operator often went blind after such arduous weaving. It is also said that, if by chance such a weaver was fortunate enough to escape blindness the Kings in those days used to cut out the palms and the wrists of such weavers, that they may not undertake similar work again for others.

It is also evident from the past history that along with the revenue, one such extremely costly Kashmir shawl was sent each year to King of England, and that was the reason why some of the Western authorities were instrumental in chopping off fingers of skilled Kashmir weavers.

Ancient Art of Weaving

The art of weaving at one time was the pride of this Country. My ancestors were all in Textile Industry and I too started career in Textiles at a young age as an ordinary weaver in a local mill. Within a few months I became a two loom weaver.

Having read about the ancient art of weaving of this country, I was greatly disappointed because the local mill that I joined as a weaver was a mill making all grey course cloths like Khaddars, the average count being 16s, and the weaving counts were anything from 8s to 20s and 20s was maximum count. A cloth with 20s warp, 20s weft, 52 reed and 48 picks was then a Superior Longcloth.

The more I read the more I became convinced that this country in the past had a great international reputation in weaving textiles and it could recapture the title if progressive-minded industrialists in Textiles would combine their might and money and encourage revival of our ancient weaving art. On a suggestion from a friend, I visited Ahmedabad in 1929, and I could see that Ahmedabad Textile Industrialists were far advanced.

Surat in the forefront

Gujrat came to the forefront of weaving, and Surat was called "Bab ul Macca" means Gateway of Macca of India", because of its prominence along with other 84 Ports of Europe, Asia and Africa. Surat became the most prominent weaving and exporting centre for cotton

textiles, and textiles manufactured in Europe were neglected by their own people and several English weavers had to shut down their Works partially. They agitated to such an extent that in 1674 the English weavers were instrumental in exciting the nation to boycott Surat Textiles, with the result that English public attacked the then Government of 1680, and continued agitation upto the year 1697 and demanded ban on Surat Textiles. The Government of England in the year 1701, passed a law, prohibiting the use of textiles imported from Surat. France also followed suit of England. The export of textiles from Surat treceived a set-back, and weaving factories at Surat lost much of their business. But the Pugree Cloth, Dhoties, Special Chintz, Red Kusumbi Cloth for Pugrees and Surat "Khinkhab" were still in great demand.

Looms Galore

Gradually, places like Navsari and Broach also installed looms and started weaving superfine mulls, kind of which was woven only at Dacca and Burhanpur. When Kashmir Shawls were being exported from Port of Surat, the Surat weavers tried their utmost to copy the materials but failed, which once again proved the superiority of Kashmir weavers. Surat was weaving a type of cloth called "Surti Dooti", which always ranked as a front line fabric and was exported to Iran, Arabia, Abyssinia and Africa. Similarly, Surat Linen was exported to British Guinea. Those days Arabs and Turks were wearing robes of "Checkrail". Cambay became prominent in Weaving and exporting the "Checkrails", which at times included weaving with Gold and Silver Jari also. Broach became hot favourite in weaving "Bafta" cloth, a super-Longcloth which was as fine and as thin as an onion skin. This cloth became hot favourite in Iran and Turkey, where in the hot summer season the rich Amirs and Jagirdars were wearing same, and was considered as the most luxurious textiles of India.

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Dacca and Burhanpur were weaving Pugree Cloth with Gold Jari heading of unique Chintz manufactured in Ahmedabad and it could easily be compared in attractive designs and durability with cloth woven on the "Coromondal Coast". It was unbeaten in the whole world, and was exported to Europe, Turkey, Java, Sumatra and Malaka Islands. "Surti Gaji" and "Surti Elachu" woven on hand looms were such attractive fabrics in lustre and texture that aristocrats of Europe were buying the same at very fantastic prices, because the above cloth could go under as many washings and wearings, yet the colour would not change a bit. This cloth was used very lavishly in Persian Durbars and by Sultans of Turkey. It is said that one Pugree length of such cloth was worth 1000 Crowns, which were equivalent to Rs. 2500 in those days. As all such cloths were being exported from Port Surat, a foreign tourist by name Mr. Nimber has written that "Surat is the reservoir of Indian Textiles and its Manufacture", but from 1777 Surat Port as an exporting port had a serious set-back.

In 1710 a traveller by name Capt. A. Hamilton states that Parsis in India, who are expert carpenters and ship-builders, are also expert weavers. The cloth woven by them like silk "Atles", "Butari", "Bafta", cloth rank amongst World's best fabrics.

Origin of Parsi Surnames "Fanibunda" and "Chhoi"

A traveller by the name James Forbes (1756—1784) has written that Parsis could be considered as best merchants and ship-builders, but they are experts in weaving and embroidery also. Their products fetch not only handsome but most fantastic prices in the World markets especially Europe and America. To weave such cloth the high "Reed" was needed, which in local language is called "Fani", and those Parsis who were manufacturing or binding such reeds for weaving the superior cloth were called "Fani-bunda". The sur-name of "Fani-bunda" still exists amongst Parsis of Gujarat.

Foreigners came to India to learn the Art

One foreigner Mr. Elliot writes that British, Portuguese and Dutch established the weaving factories in Surat, Navsari and Gandevi where Parsis worked. Products were sent all over the World. Indian craftsmen by now mastered the art of creating beautiful designs on the loom. The brocades are the most gorgeous and highly ornamented of all Indian textiles, the most famous in legend and history are the "Khinkhabs or Kimkhab". Even today Benares brocades are World famous. Benares was once and even today famous for her shikargah brocades which were and are considered to be masterpieces of weaver's art. The art of brocade weaving has survived the ravages of time, and even today various types of brocades are produced in large quantities.

Cotton weaving in India

Muslin represents the highest development of pure cotton weaving in India. Dacca Muslins were exported to far-off lands, and Roman patrician women used to display their shapely forms wrapped in diaphanous Muslins. The yarn used was spun on the Takli by Hindu widows between the ages of 18 and 25. They alone with their tender fingers and deep concentration could spin such fine yarn. The yarn had to be spun early in the morning, while the dew was still fresh on the grass. The fabric woven with this yarn was so fine that when it was spread out on the dew-washed grass it could not be seen, and hence the name, Sabnam. Watson has rightly said "With all our machinery and wonderful appliances, we have hitherto been unable to produce a fabric which for fineness and utility can equal to woven air of Dacca". This is true even today, and more is the pity for the art of weaving such fine Muslins has been forgotten.

The Jamdani or figured Muslins continued to be manufactured till recently at Dacca. The Jamdanis may be called loom tapestries. The substance of the fabric is shuttle-woven. The names of the Jamdani Muslins indicate the nature of the favourite designs. Jamdanis are indeed famous for their complicated and

exquisitely delicate designs. While Dacca was the chief and main centre of the Muslim industry, it also flourished in Patna and some parts of South India where the most beautiful textiles were woven with designs in Gold and Silver thread.

Inventors of Weaving

Thos R. Ashenbush writes that the art of weaving is of great antiquity among the Chinese Hindoos and Egyptians, and has been practised by them for thousands of years. Pliny says the Egyptians were the inventors of weaving — "that the Egyptians put a shuttle in the hands of their Goddess Iris, to signify that she was the inventress of the art of weaving". However, this may be, weaving was undoubtedly practised by them from a very remote period, and this is one of the arts of which, if Egypt was not the mother", she was certainly, "the nurse", and both with the Egyptians, the Chinese and the Hindoos, Spinning & Weaving were carried to great proficiency, and the productions of the distaff and the primitive loom would compare very favourably, for fineness and delicacy — if they would not indeed surpass — the productions of the modern manufacturer.

It is said of the Chinese that they can trace back documentarily the use of silk fabrics as far as the twentysixth century before our era.

TANCHHOI

"Tanchhoi" is a pure silk brocade noted for its exquisite design and colour, and differentiated from "Kinkhab" which has been indigenous to this country for several centuries and uses gold and silver threads inter-woven with the silk.

India first came in contact with this textile through Persia where the industry was of long standing and was at that time called "Farsi" silk.

Its manufacture in this country can really be traced back to the first Sir Jamsetji Jejeebhoy, who returned from one of his China trips with samples of this material. China was the original home of all silk and their design, workmanship and colour were far superior to the "Farsi" product. Attempts were made to manufacture it here but they proved a failure. Sir Jamsetji

then arranged for three Parsi boys, the Chhoi brothers to be sent to China to learn this craft, and they returned after a stay of several years. On their return they established the industry in Surat, which was found to be the most suitable place, since silk and "Kinkhab" industry had been in existence there for generations. They carried on this trade with varying success, and the cloth was named after its original manufacturers, "TANCHHOI" — the three Chhois.

India's Challenge to the World

On my return to Bombay, I compared weaving of Ahmedabad and Bombay and wondered if Bombay Mills would ever progress like Ahmedabad. In the meanwhile, thanks to "Mahatma Gandhi" the Father of the Nation, that in 1930, after Dandi March, boycott of British goods movement took shape and along with Ahmedabad, Bombay Mills also started weaving and catering to the taste of Indian Public as British textiles were boycotted. It was the World War II that once again brought India to its original status of one of the biggest exporting countries in the world, and ever since that time India has thrown a challenge to the whole World that she could beat any country in the World in the weaving of textiles. Today India is the world's second largest Textile producing country, the first being America. Parsis were the first in 1854 to start a Cotton Textile mill in Bombay and Parsis were the finest Textile Technicians for a number of years.

NOTE:

MR. JEHangIR FRAMROZ SHROFF (born 6-12-1910) is a self-made man, who started career as an ordinary weaver in the New City of Bombay Mfg. Co. Ltd. earning Rs. 24/12/0 per month. From this humble position he rose in the same mill to foreman, Supervisor, weaving master assistant manager and manager in 12 years of his early career there and stayed as Manager for further 16 years when he, its one time weaver, became one of the Directors of the same mill. This is a unique instance worthy of note as there is no parallel known in the history of Textile mills in India. He is now a Senior Executive of Messrs W. H. Brady & Co. and Director in several concerns. Wherever he is he is at top or reaching it. He is a man of many parts and has

a finger in many pies, yet the pies bake well and the finger does not scorch. His present incumbencies are many and varied — as under:

President — Cusrow Baug Welfare League.

Vice-President — Bombay Parsi Textile

League

Vice-President — Bombay Parsi Association

Vice-President — Indian National Kennel

Club.

District Grand Master in Freemasonry

Founder member and Executive Director of

Lions International and First Lions Club

District Commissioner of Scouts and Guides

Company Commander — Civil Defence —

Home Defence Wing (Maharashtra)

As a boy then residing in Colaba he used to catch first bus of five minutes past five, got down at Bori Bunder and by Railway went to Byculla. Walked down to the Mill. Worked there whole day. There he had kept a bicycle on which he rode to Victoria Jubilee Technical Institute for training in its Textile Division. Being an ordinary weaver he was debarred from joining classes but he with others were on sufferance learning in a separate batch taught and trained as unwanted substandard intruders under the lofty portals of a teaching institute. Classes finished by 8 p.m. He took his bicycle, rode back to the mill. Left bicycle there. Walked down to Byculla station. Got down at Bori Bunder. There took bus to Colaba. Reached home by 9 p.m. Studied till midnight and re-

peated such days six times a week. How lazy he must have felt himself on Sundays he did not reveal to me.

My experience of him as an indefatigable individual was when I was attending his lectures and instructions on Civil defence. His knowledge of bombs and explosives was perfect and his instructions precise. I was not bombed out but certainly felt myself bombarded with varieties of explosives and incendiaries and the visual aids and visions of house collapse, fires around, traffic jam and panic. We had a sigh of relief when we came out, unscathed, under his instructions.

He takes keen interest in Indo-Iranian Cultural activities and is the Hon. Secretary of Iranian Cultural Society.

He is on the Advisory Board of Parsiana from its beginning. Our Advisory Board is a prestige body constituted of suitable, select individuals joining it by invitation. We are proud of him and he is happy with Parsiana.

Whenever our Community will make a move for its betterment it will be inevitable to consider his practical suggestion of the formation of Zoroastrian Co-operative Finance Corporation. We have a Zoroastrian Cooperative Credit Bank. Under Banking rules a Bank cannot trade and cannot take business risks. A Corporation can and is meant for trading. That is our only salvation. (Read his speech — Parsiana April 1966 issue)

P.B.W.



FALLACY OF OUR PESSIMISM

By

PROF. NADIR A. MODI, M.A., LL.B.

(GIST OF A LECTURE TO YOUTHS' OWN UNION)

TO deliver lectures on our Community problems and offer solutions is much in vogue. It solves no difficulties but at least focusses our attention to the magnitude of growing problems and to the problems of growing magnitude. The community's mind is here short-circuited. We love to listen — perhaps we have time to spare. Calculations of work load and cost evaluations are relegated to our debating societies. We go along with Father Time, hoping him to snugly put the solution in our lap.

Work begets wealth and wealth does give some happiness so long as it stays put. We are happy without the data of work and wealth to ensure a lease of happiness.

We also have many Prophets of gloom. But neither of these two excesses sees our problems in correct perspective. For want of what is not let us start on what little we have of statistical data which we can collect second hand.

Since wealth ought to be, and normally is but the product of work let us take work and wealth together. In the first place, let us realise that in this respect the problems of our community are of a lesser nature than the problems of our other sister communities and that still we are in a more advantageous position than they are. An economic survey of Bombay City recently published by the University of Bombay and sponsored by the Research Programmes Committee of the Planning Commission dealt with the "Work, Wages and Well Being" of different communities in Bombay. It reveals certain interesting and from the Parsi point of view, quite satisfactory, figures. For example, the findings of the Survey show that among families the monthly income of which is Rs. 250/- and over the percentages community-

wise are as under:—

Maharashtrians	7.1%
Muslims	9.8%
South Indians	17.3%
Christians	22.6%
Gujaratis	25.0%
Sindhis	31.2%
Jains	36.9%
Parsis	38.7%

Thus, against an average of 14.3% families earning Rs. 250/- and more the Parsis have 38.7% such families.

Similarly, against the average Bombay per capita income of families living in tenements of Rs. 58.8 per mensem, "the highest family and per capita incomes were obtained by the Parsis". An average Parsi family was in receipt of Rs. 521.7 and was in the comfortable position of providing each of its members with Rs. 123/- per month..... Thus nearly 3/5th of the Parsi families had incomes over Rs. 250/- and less than 1/10th had income below Rs. 20/-". As against this one disturbing feature I wish to point out is that amongst the Jains only 0.5% families had income below Rs. 50 while among Parsis 4.8% families had incomes below Rs. 50/-. This would tend to show that our lowest rung of poverty is virtually desolate destitution and that the Community might well do more for its destitute brethren in this class.

We have many prophets of gloom amongst us, who, wrongly and unwisely keep on spreading pessimism and periodically announcing that we are going to the dogs. Figures shown herein taken from the Bombay University Survey will show that if we are going to the dogs then the others have already gone there: The following figures show the economic status of the population communitywise and show how many male and female earners there are in each community.

The figures in brackets indicate the percentages of earners to the total in each case. These figures however relate to a small sample survey.

	<u>Males</u>	<u>Females</u>	<u>Total</u>
Hindu	13,177 (53.8)	1,398 (6.3)	14,575 (31.3)
Muslim	2,257 (47.1)	121 (3.3)	2,378 (28.0)
Parsi	536 (54.0)	104 (11.2)	640 (33.3)
Christian	775 (49.2)	206 (15.8)	981 (29.9)
Jain	514 (43.9)	8 (0.9)	522 (25.6)
Others	179 (37.6)	26 (7.2)	205 (24.5)
Total	17,438 (51.4)	1,863 (6.4)	19,301 (30.6)

So far as accumulated wealth is concerned the figures are far more encouraging. If in the absence of any better indices, charity trust wealth is any indication we find that the average Parsi in Bombay has as it were a per capita charity block for his welfare which is about fifteen times more than the next nearest community, viz. the Jains. However, everything is not as rosy as these figures indicate and further it is true that neither the wealth nor the Charity resources of the community are distributed fairly and wisely from the economic point of view. Some figures taken from that excellent book by Mr. Shapur Desai entitled "A Community at Cross Roads" reveals this anomaly. In 1948 Mr. Desai pointed out that the Parsi Panchayet had at its disposal 426 buildings with 4323 tenements housing approximately 20,000 persons. As against this 2841 poor families were on the General Register of the Parsi Panchayet and presumably, therefore, in need of subsidised housing. Out of these 2841 families only 695 families were in Charity buildings and 2146 families were in private owned houses presumably spending their scanty resources to an uneconomic extent on rent. In the interval both these figures have mounted upwards.

These figures by and large tend to show a fairly well-to-do community and the next question therefore is what are its problems work-wise and wealthwise? The main problem is the age old problem viz: that it is easier to get at the top of the tree than to remain there. The problem has two aspects:

- (a) That we must retain our position
- (b) That we must gain more ground.

It is one of our — that means yours and mine — problems to assess the various aspects of human decay so far as it affects our community and to consider how these can be combated.

We have no blue-prints. Several ways might be equally good. Report of the Second World Zoroastrian Congress and the compendium of the P. N. Mehta Memorial lectures printed by Parsiana in its April 1966 issue contain any amount of material which requires to be worked out further.

Now if any scheme appeals to you as worth putting into effect by the community then what a group like the Youths' Own Union or Young Collegians' Zoroastrian Association needs keep in mind is that it is *we* who form an integral part of the community. It is upon the energy, determination, wisdom and vitality of groups like ours that the future of the community will depend. As the late President Kennedy said about the nation: You must not ask what your community can do for you, you must rather ask yourselves what you can do for the community. The community viz, your forefathers of the past have done a whole lot for you. If you can only keep up the rate of growth which they had, and seek the vision they had you will have done enough. The community, i.e. you and I are faced with all sorts of problems: decreasing numbers, increasing migration accompanied by loss of communal and cultural integrity; falling character standards, increasing living standards lowering marriage ratio, increasing divorce rate, effects of inter-communal forces, decreasing leadership, increasing dissatisfaction with established religious systems of the community; unsatisfactory husband-wife, age-youth relationships and so on.

Parses do not stop existing just because we stop advancing and prophets of gloom exaggerate these problems. Nor can we afford to follow ostrich policy of burying our heads in the sand and hope for solution to fall in our lap. Some of us feel that we have enough problems of our own without taking on the problems of anybody else. We overlook that most of our problems fall into a pattern of a larger nature. If for nothing else then for what Lord Birkenhead has called 'enlightened selfishness', we would do well to work on these problems.

If dynamism is not forthcoming from our youth groups this bodes ill for the community. Y.O.U. which has such a tradition of activity could set up its own working group for considering matters of this type of broader and deeper import. If leaders are available you will find that workers for these projects of a far reaching future importance will always be forthcoming.

We cannot afford to forget that with communities as with individuals, we only reap what we sow. Our future depends on our present. Time Past and Time Present is contained in Time Future (Eliot). From this it follows that

if we do not sow today, we and our children cannot reap tomorrow. We must also remember that between the sowing and the reaping many months of patient waiting may have to go by. And it is only one more contingency that everything that we sow may not reap.

Do not let your wish bone be where your backbone ought to be. We have a proud and ancient heritage. Let us not be false to this heritage, let no one say and feel that we did too little and that too too late. Let your wise thoughts, persuasive speech and effective action tell.

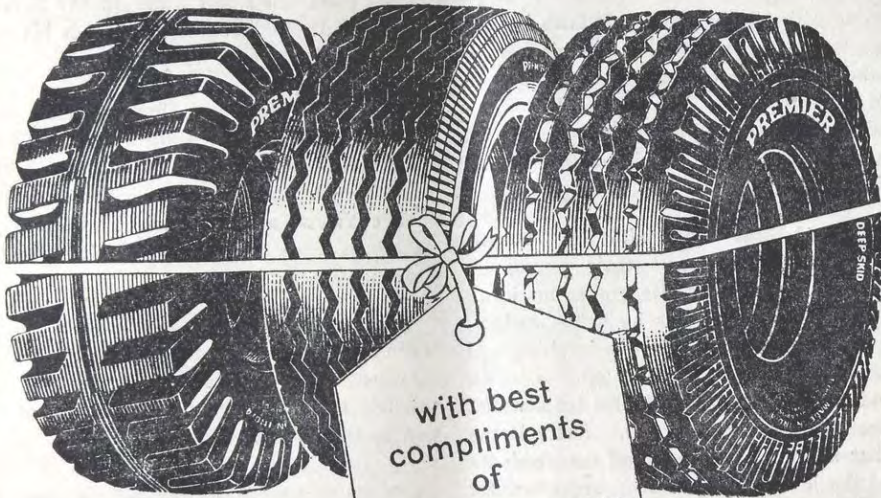
Let us follow our religion. Its tenets and teachings are so simple to grasp and so easy to follow. Simplicity is its highest perfection. It is we who complicate our life and feel confounded by acting Doubting Thomases.

Ushtano Jato Athrava,

Ya Spitamo Zarathushtra !

Let us begin Religion and let us begin schemes and continue them with follow up unflinchingly. Each problem will solve itself when it actually becomes a problem in hand and not in the air.

September - October 1965		• ARDIBEHESHT 1335 Y.Z. KHORDAD •	
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"To ride, to shoot, to speak the Truth,
That was the ancient Law of Youth,
Old times are past,
Old days are done,
But the Law runs true, Oh little Son."

By

GOOL K. S. SHAVAKSHA



THE FIRST NEED of a religion is Faith. Faith means to have belief in something or someone with all one's heart. If faith is shattered a man gets hurt for life but if his faith is sound and truthful it can never be shattered. TRUTH means True Values of life. This reasoned faith of man differentiates man from animals. In the Avesta it is called "Foret Freshni".

Animals and birds have faith by instinct. They love their master and their young by instinct. Man goes further. He gropes for intuition and in order to get this he fights instinct, because his mind wants to get this intuition and he tries for it by reason. This fight is often called evil because at least it doubts for a while. There are two aspects of Doubt. There is the doubt that is open to reasons and the obstinate doubt of the ignorant mind. It is important for parents to know about these two doubts in the Avesta and not mix them up. (We will take it later, in detail). For the child it is important that the parent gives "straight-faith", the faith a child has in his parents. Faith which gives security and bliss is called Armaity in the Avesta.

Zoroaster taught that man improves in Three Stages. First, he learns from his parents. Secondly, he learns by himself. Thirdly, he contemplates and then imparts his knowledge. Some Savants call the three stages as follows:—

1. **POURECHISTEE** — The Child of the Mind, the Simple faith of the mind which believes utterly.
2. **FREYNEE** or **VOHU FRAYAN** — the enlightened mind which reasons and then yearns to teach.

3. **THRITY** — the mind which contemplates solaces and heals and eventually gives one's self away in the Service of God: He teaches and spreads his mission for knowledge to people.

These names are the three symbols of the three stages of man's enlightenment. (Zoroaster's three daughters are called by these names. Some Savants say these are symbolic names.)

The Yasnas are divided in Three parts; 1 to 24; 25 to 48; 49 to 72. The AHUNAVIRYIA is also in the 3 sections.

(Here many Savants affirm that what was written by Jamasp in the Jamaspi was the knowledge he had acquired through Three visions: and call them the philosophy of vibration or the STOAT Yasna.)

So the first stage for a child is pure faith. The faith which a child gives its parents and teachers. The second stage comes when doubt enters but the trained mind starts to think correctly and doubt becomes Rationalised. If the mind is healthy, it will reason correctly. If it is taught the wrong values, it will reason wrongly. The foundation has to be strong. The parents or teachers have to be good and do right.

The reasoning mind cannot work without doubt. Here doubt is of the questioning mind seeking truth. This leads to rational thinking. Doubt here is the twin brother of faith. Ignorance is the dark aspect of the mind but it is not its evil aspect and so the is still called "mino" an angel — "GHANNA — MINO". Pure faith which is utterly good is called "SPENTA MINO", the pure part of mind. This part can not think, speak or do anything bad. It is total good for the sake of goodness.

Zoroaster warned against blind faith and history has taught us that he was right. The faith of the Thugs for Kali; the faith of the medieval Christians and Mohammedans; the faith of the Nazis in Hitler, all these prove that blind faith, in any cause, is not good.

We learn from Yasna 28-6 and Yas. 29 - 8, and also from Yeshts Tir, Jamiad and Fervendin that Zoroaster's teachings will live forever because they are just Truth and nothing else.

He taught that if you bind yourself to Truth you cannot go wrong.

His followers from time to time have changed quite a few rituals according to their mode of thinking. Hence some crude rituals have slipped in. Yet many ceremonies which we may think are crude, if properly analysed, strictly from the point of Truth, are based on rational thought but it is our sentiments which have changed with time.

We must believe as advised in Tir Yesht: "In spite of doubts remember Zoroaster's teachings are based on Truth", (only be sure they are Zoroaster's teachings). "As all the stars look up to Tir so all teachers will look up to Zoroaster."

A child has faith in his parents, a pupil has faith in his teacher, this factor is very important for without this faith a child feels insecure and many mental sicknesses can be traced to this insecurity in childhood. In the olden days they used to say: "what you do with the child for the first five years of its life is what he is for life." The child is absorbing the atmosphere around him through his pores. Give him love and security for the first five years and he is safe forever. Give him faith in his God and he is safe in his mental health. Teach him Truth. "The Child lives an aeon in his first five years. Everything he does in later life is a reflection of those years." So teach him the prayer of Truth. Instil in him Truth, real Truth, not bias, twisted facts, which are worse than lies. Teach him to thank God for what he gets and teach him not to ask God for favours. He should feel grateful for the favours of good health and good mind and learn to be contented with them. More is for man to secure by efforts.

The Third stage is the stage of contemplation, reflection and action in the interest of the great Truth.

Teach a child to thank God for the air he breathes, the air which gives him life. Teach him to thank God for "the green pastures and still waters" (Yasna 63) and the power of contemplation and the power to reflect and reach "the sun of one's dreams".

In Kerfa Muzda it is said: If I reflect only on what is good I cannot go wrong. So let me think of green pastures and still waters and the bright sunshine which are the reflections of beauty and the stillness of God. The depth and the flow of kindness under the stillness and the reflection are the "currents of correction." Let me reflect on the greenness which reflects only beauty and covers the ugliness of the drab earth — the manure and the worms. This is life; Beauty conquers ugliness. The sun only reflects God's Glory, which is Truth. I promise to live this Truth, with love and kindness in my heart trying to reflect God's love, kindness and truth. (also see P. 204 of Zoroastrian Credo both are free translations changing with the context)

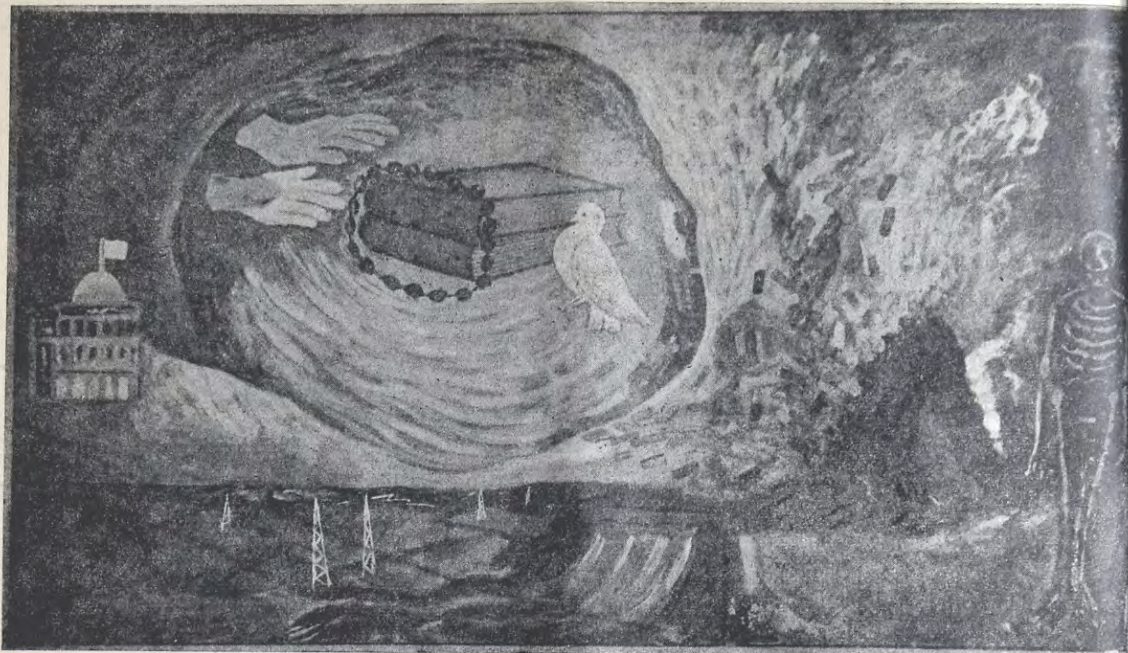
In Farvandin Yesht, Verse 89, It is said: Zoroaster was the First Teacher who ploughed the furrows of human thought. He fought against human and animal sacrifices and taught that God is in all men and all animals. He fought against idol worship." (It is surprising that his religion should be called a Dual religion! This Verse 89 explains Gatha I Yasna 33, Verse 12-13-14.) "He tried to explain that Ahu, the pure spirit, was also Mazda, the Creator and that man should first understand himself in order to understand God."

In Hoshbam it is said:

HUSHYE AZEM CHIT YO ZARTHUSHTRE
FRETEMA

(Fretemo = to move forward) NEMAN —
NAMCH'".

I, Zoroaster your prophet will take you forward through all your earthly difficulties. If you hold on to Truth, I will take you eventually to Eternity and Peace. HEMEM THWA HEKHAM.



ASPANDAD

Artist: P. B. WARDEN

Spenta Armaiti (perfect wisdom). She is presiding over the surface of the earth—upper 3 or 5 feet of crust. She is the protecting mother to mankind preparing food as all vegetation grows within this crust.

Avan, Daen, Asiswang and Mino Marespand are her Hamkars. Aban distributes water to fields, Daen gives Mathras, resonating with nature and contained in a book of prayers. Those who can derive from Mathras their mystic hidden elements (mithra — represented as mala) and become innocent like a dove — Mino Marespand — deserve favours of Asiswang, deity presiding over blessings of all kinds. Blessing hands come out from God knows where, but they do come and give plenty in natural resources and prosperity in industries. Calamities like Upheavals otherwise overthrow cities, etc.



Zarathushtra: His Message:

'Spenta-Armaiti': Amesha-Spentas: V

By

MAHYAR BYRAMJI PATEL

"The finest of Steel is tempered and shaped to its dependable Perfection by the Devoted Craftsmanship of unswerving Patience and Fortitude!"

"Spentâ vê Âarmâiti Vanghûhîm Varemaidî!"
"Let us choose Holy Good Armaiti!"

BELIEVE in Religion all that I can understand, and respect the rest without rejecting it!" These were the words uttered over two hundred years ago, by the foremost thinker of those times, Rousseau, and to-day they are as undisputable as they were when first expressed by the famous French Luminary.

Over eight thousand years ago, Holy Zarathushtra laid stress on observing the most perfect and unswerving faith in Ahura-Mazda. The Divine Spark lurking in the inner-most recesses of every human heart unfailingly leads man to resolve all his doubts, and guides him along the safe but narrow path of Righteousness. It is called the 'Daughter of Mazda,' and adoringly named 'Armaiti'. This firm faith in piety, Spenta-Armaiti, is regarded as the Holy-Mother aspect of Ahura-Mazda. She is very closely united with Asha, and is implanted in every human heart by Ahura-Mazda Himself. It represents the 'still and quiet voice of the Great Silence', which guides a human being whenever doubts assail him and his reason is overwhelmed.

We have before us the precept of noble Abraham Lincoln, who used to say, that in the midst of the most tortuous of difficulties there always was one great remedy to which he would apply himself, with the most satisfying result. His great recourse was to go down on the knees and pray. There, he would find an unfailing source of succour, and the path to right direction would always open up before him. This was the unconscious invocation to Spenta-Armaiti.

'Nirbal ke bal Ram!' God is the strength of the weak! Armaiti represents firm, unshakeable faith in the Eternal Justice of God. Zarathushtra encourages us always to keep our ears open for the message of Armaiti. She guides us through the portals of death, the bodies are surrendered to her loving care, and the souls secure her protection. Because Spenta-Armaiti represents firm and unshakeable faith, in later Avesta she is designated as the Guardian Angel of the Mother-Earth. The Zarathushtrian, at the time of initiation into the Holy Faith resolves to adopt Armaiti as a life-long guide, and is content to pass into her loving care after death. In the language of the later Avesta, Spenta-Armaiti becomes Spendarmad.

Armaiti typifies Mother-Earth and Mother-Love, and represents such virtues as Patience, Humility, Devotion, Love, Faith, faith in the existence of higher things like the soul and God. She is the opposite of Taramaiti, which is negation and rejection of faith.

Faith should be distinguished from credulousness, which implies the tendency to believe in whatsoever one hears, and which the Holy Prophet condemned in no uncertain terms.

In the Holy Gathas, Zarathushtra clearly says: "Listen to the highest truths, and then consider them with illumined minds, before deciding between the two. There are the twin-spirits, the Good One and the Bad One. They are totally apart in thought, word and deed. Between these two, the wise ones choose aright, but not so the unwise. In the end, it shall be worse-than-the-Bad for the wicked, but the

better-than-the-Good for the benevolent!" In the spirit of the Gathas, twin Primeval Causes, which both have their being in Ahura-Mazda alone, are jointly the cause of creation. It was due to their opposing activity that one created Life, and the other created Not-Life. They represent Polarity. Thus, are Faith and Credulence distinguished by Holy Zarathushtra. The first is praised; the second is condemned.

In the Holy Gathas, Zarathushtra declares himself wedded to Ahura-Mazda by devotion through Armaiti. He invokes Armaiti to reveal to him the ways of Ahura-Mazda. He appeals to her for Divine Enlightenment. Armaiti opens up the dam in his heart, and the waters of infinite Love and Mercy surge out and encompass all those that come within his spell. Through her, he loses himself in love for his beloved Ahura-Mazda, and now sees and hears only with the eyes and ears of his Beloved. Here, is the germ of mysticism, that developed into the cult of Sufism. He walks with and talks with Ahura-Mazda, to whom he implores to grant the gift of Armaiti to those to whom he proclaims his faith to ennoble and delight their lives.

Armaiti explains the Laws of Ahura-Mazda to Holy Zarathushtra, and furthers Ahura's Imperishable Kingdom. She increases Piety. She blesses with prosperity. She imparts vigour, and furthers Righteousness. She inspires the wise, and ushers in the Kingdom of Vohu-Manah. Her Glory deserts the impious, but to the pious, she grants them their heart's desire. Ahura-Mazda is best served through the deeds inspired by Armaiti's Devotion. She grants Power-to-Rule to the righteous, when implored, and works with Ahura-Mazda at the time of the Final Dispensation.

In the later Avesta, we are told that Holy Zarathushtra opposes the nomadic life, and preaches the usefulness of a settled agricultural

life, which Ahura-Mazda has laid out as beneficent for man-kind. Armaiti works conjointly with Geush-Tashan, the Life Creating Wisdom. The Righteous ones further the settlements of Armaiti through their diligence, with the help of Vohu-Manah, who is the protective angel of the cattle-world. They replenish the earth with pastures.

During devotional prayers, the faithful house-holder prays to Spenta-Armaiti to enter his house and dispel all heresy. As she is the daughter of Ahura-Mazda, so too, she is the mother of Ashi-Vanghuhi, the genius of Good Piety. Rata, the guardian spirit of generosity invokes Armaiti for her help. At a much later period, Armaiti becomes Mother-earth itself, and wears the star-studded sky for her garment. She is wise, even and perfect-minded, with efficacious eyes. She imparts virility to man and resides in his Will. She rejoices at the cultivation of waste-lands by the faithful, and by the rearing of cattle. She feels happy at the birth of a virtuous male offspring. She suffers the grief of a mother bearing a dead child, whenever the impious walk around her, and trembles like a sheep in the presence of a wolf when the corpse of a wicked person is interred within her bosom. She feels harmed when she is trodden upon bare-footed.

Upon her ample bosom, she bears high mountains and large rivers and oceans. She blesses the Good Creation by bearing trees, fodder, corn and fruits, upon which men and animals thrive. She brings prosperity and nourishment to all. The faithful venerate both, the earth and virtuous women in order to propitiate her. She assumes now the role of guardian of virtuous women, and men pray to her for acquiring noble and beautiful wives. She is very wroth with the faithless wives of virtuous men. At the time of the great Renovation, she will put to flight Taromaiti, who is her adversary.

Armaiti, as the active helper of Ahura-Mazda is pleased to be bountiful in her rewards, and blesses with open-handedness the efforts of the virtuous tiller of the soil and the cultivator of good and useful cattle. She detests the parasite and treats him in niggardly fashion. Her vctaries are strong, happy, healthy, prolific, hard-working, generous, active, brave and truthful men and women, who are most inclined to the furtherance of Ahura-Mazda's Good Creation.

Blessed are the lands and the hearts where Spenta-Armaiti lovingly resides, for there resides all the good things of life. She is the good and bountiful mother that is pleased to nourish her

offsprings, and in giving, finds her own strength multiplying. The prosperity of her children brings succour to her own self, and the more she gives, the more she flourishes. Holy Zarathusht-ra implored her to be his own, just as we now implore her to be ours. With him, we too must sing:

"Verily, shall I weave my songs of love unto thee, O Asha, and Vohu-Manah, and Ahura-Mazda, as I never did before, so that by your infinite Grace, may imperishable Kshthra and Armaiti rise within us! O! come to us at our call and grant us Perfect Bliss!"



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K H S H N O O M

('Manthro-baeshazo')

Mystic Healing Powers of Avesta Formulae.

By

P. N. TAVARIA

REGARDING healing or curing by sacred formulae ('Manthro-baeshazo') it is stated in Ardibehesht Yasht; 6:

"(There are) healers by imparting purity, by (administering) justice, by surgery, by herbs, by holy formulae. Of all the healers, the one (healing) by sacred formulae is the best, because that pious person effects cure through and through to the source," (and cures not an organ but the complete man).

Though all Zoroastrian prayers are based on the laws of Staota Yasna, sublime vibratory sounds and their colour aura, there are certain short prayers known as 'Nirang', which are endowed with talismanic power of curing or mitigating the severity of ills or physical maladies arising from planetary influences inflicting condign punishments. Similarly there are Nirangs for overpowering and counteracting witchcraft. For worldly Zoroastrians like ourselves who are naturally subject to misfortunes in life certain Nirang formulae have been prescribed which are framed from particular Nasks. There are also Pazand Nirangs, which when practised with the observance of Zoroastrian canons of purity, including particularly the anti-microbe Baaj-rites, are efficacious for maintaining Khoeh, (personal magnetism or aura), and in curbing passions etc. In Vandidad; 19, 8-10 we are told that the functionary agents like the sacred mortar, sacred cup etc. used in performing

holy ceremonies, and the Yatha-Ahu-Vairyo and Ashemvohu prayers are good as Nirangs for fighting Satanic powers. The above Nirangs are recited for securing varied kinds of boons, like purification of one's thoughts, killing a serpent or noxious animal, re-uniting husband and wife thrown asunder and numerous such others, In all 79 Nirangs are collected in Masani's book Pazand Prayer Series No. 3.

In Sarosh Yasht Hadokht there is beautiful description of how the Yatha Ahu Vairyo protects a holy person. Similarly, in Ardibehesht, Behram, Sarosh (major), Farvardin, Hom (major) and Ashishvagh Yashts, as well as in Hadokht Nask, there are references showing excellent benefits accruing from the practice of recitation of Manthra formulae, which are a Zoroastrian's richest treasure both in this world and in the next. These Manthra-Spenta have been recognised by the holy Pahlavi sages as 'The knowledge of knowledges'. Only those who practise the recitations can realize how very beneficial these Nirang prayers of Manthra can be.

Besides these there are rules regarding the practice of reciting a single selected 'Ism', Name. Sacred names of the Creator, Ahura Mazda are made use of for desired boons. In Behram Yasht; 42 there is the reference to 'Nam-ajbaitish', lit., invoking of sacred names. In the practice of invoking names the Science

of Numbers comes into play. Thus one or two name or names are repeated 101 times or 303 or 505 or 707 up to 2121 times. For keeping count of these a rosary of amber beads is employed, since amber possesses magnetic power (when rubbed on a woollen fabric.) In certain cases this practice of repeating names extends to 40 days as stated in Aban Yasht; 101, where the supplicator is allegorically referred to as a 'horse-rider', who would take forty days to cover a distance. In other cases, the period for operating the rosary is even longer according to individual cases. This ritual of forty days is known as "Chehlo".

Healing through holy spells — 'Manthra-Baeshhez' is declared to be the best. In Vandidad (XIV, 8) we meet with the allegorical Khrafst-raghna, the sledge-hammer for smiting the noxious animal, and Ashtra-mairya, (XVIII, 4 *ibid.*) weapon for killing the serpent. Khrafstra and Mairya are not actual animals, but they represent the lust (or avarice) abiding in the body (Azush zarzdishto; Yasna; 53, 7) of those animals. Again, the smiting weapons of a holy priest are not of steel, but are the instruments like the sacred mortar, cup &c. employed in the holy ceremonies coupled with the chanting of Manthra-Spenta formulae.

No better reference could be cited in proof of this than what occurs in Vandidad (XIX, 8-10), where we read (S.B.E. Vol. IV) as under:

"Again to him said the guileful one, the Maker of the evil world, Angra Mainyu: 'By whose Word wilt thou strike, by whose Word wilt thou repel, by whose weapon will the good creatures (strike and repel) my creation who am Angra Mainyu?' "

Thus in answer to him said Spitama Zarathusht-ra:

'The sacred mortar, the sacred cup, the Haoma, the Words taught by Mazda, these are my weapons, my best weapons. By this Word will I strike, by this Word will I repel, by this weapon the good creatures (will strike and repel thee), O evil-doer, Angra Mainyu. To me Spenta Mainyu gave it, he gave it to me in the Boundless Time; to me the Amesha Spentas, the all ruling, the all beneficent, gave it.'

Zarathushtra chanted aloud the Ahuna-Vairya, and the evil and the Evil-doers fled.

In Yt. 13, 89 the Prophet is referred to metaphorically as the first Priest (Athrava), the first Warrior (Rathaeshtao), the first Husbandman of Land (Vastryo). An Athravan or the priest who tends the sacred fire (in a fire temple) dispels the evil effects in the atmosphere created by the evil forces in the work of the night, and transmutes them into good, or blissfulness by his chanting the Manthra Spenta, the holy formulae, in which the blazing flame is the principal weapon. The prophet is called the first (foremost) Athravan because he employed his three spiritual powers with the aid of his "Kavaem Khareno" ("kingly glory") (Yt. 19, 79) and performed sanctifying rites in the dark of the night. These spiritual entities possessed Baod (perfect divine knowledge), Urvan (soul), Kehrp (subtle form) and Huraod (luminous body.) These spiritual entities were abstract in character and though called "wives" did not possess physical bodies. Their Farohers are revered in Farvardin Yest 139.

The prophet is called the first (foremost) Rathestar in the sense that he fights against evil forces not with steel weapons but with spiritual implements like Havanim, Tashta &c., (men-

tioned in Vd. XIX, 8) coupled with the chanting of the Word Ahunavar. Vashtriyosh literally signifies 'Husbandman'. The prophet is called the first (foremost) husbandman because he unearths the evil forces rampant in the soil and sows the seeds of purity in the soil and in the world, by teaching humanity the laws of piety. It is easy to understand that a great Saviour

does not go about with a plough on his shoulder to plough the land, or with a sword hanging by his side. His farm is the humanity to which he conveys his divine message and teaches God's laws of purity, and his weapons of smiting the Arch-Fiend are the Manthra-Spenta, sacred spells.



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Brotherhood of Man

The 14th canto of the Gatha Ushtavaiti runs thus:

"Who is thy friend, Zarathushtra, wed to truth ?
Who would make famous thy Great Brotherhood ?
Kava Vishtaspa is this man, who shall
Bring Peace unto the Earth, goodwill to Man;
Mazda, to others also sent by thee
Will I deliver message of Love!"*

Kava Vishtaspa (King Gustaspa) was the first Royal follower of Prophet Zarathushtra. The mighty King of Bactria accepted the Fatherhood of God and surrendered himself to Ahura Mazda. Such was the great influence of our prophet. So was he to bring about the brotherhood of Man.

King Vishtaspa's surrender was perfect on account of his righteousness and love. That others may follow 'the straight path' he himself became a living example to them. He surrendered so graciously that Prophet Zarathushtra called him "a true friend, wedded to truth", to bring Peace unto the Earth; to bring goodwill to Man and to make the Brotherhood of Man graceful and honourable.

When the strife and struggle for human existence is so overpowering
LET US PRAY "AIRYAMA ISHYO" (Yasna 54) an appendage to Gathas.
(It is our Prophet's message of much desired brotherhood).

"May Brotherhood of Man, for which we yearn,
Come down amongst us and rejoice the hearts
Of men and maidens of Zarathushtra's faith.....
I pray to Asha in His Grace to grant
These blessings for which human souls do long,
Which Mazda Ahura hath meant for all."*

— BEJON N. DESAI

* Translation by the late scholar Dr. I. J. S. Taraporewalla.

Copy of Letter from
His Excellency A. Massoud-Ansari
Ex-Iranian Ambassador to India

Teheran
July 28th. 1966

My dear Major Irani,

It is some weeks now that I received your very kind letter of May 19th. I should have replied immediately but I thought I might wait for the journals of "PARSIANA".

I have received this parcel recently and I am grateful to you for this valuable and interesting journal. You know my dear and esteemed friend, how much I am interested in the Parsee Community and am proud, as an Iranian, of their great achievements in India. I found in "PARSIANA" a number of articles of interest and usefulness to me, and I am happy to notice that "PARSIANA" is trying to harmonize old Zoroastrian traditions with the new inclinations and aspirations, and help to revive the true Zoroastrian Culture scatter away the clouds of pessimism about the future of your so noble a Community. May God preserve you for ever. The English translation of my article which was printed in a Teheran Weekly "Bamshad" is also published in May 1965 issue of "PARSIANA" and I am very much obliged to have had my article for publication to this esteemed journal. In their Editorial they have given an extremely kind comment on it. You will oblige me, very much if you kindly convey my gratitude to Mr. P.B. Warden the managing Editor and his colleagues for the way they have treated this humble writing of mine.

Oh! You are, my dear friend, simply wonderful in expressing in your letter your feeling towards Iran in such a marvellous way. I am profoundly touched and feel myself so near, so close to you. What I can say more!

Next year, in October, we shall have the celebration of the 25th. Century of the foundation of the Iranian Empire by Cyrus the Great. Certainly we shall have a Parsi delegation from India on the historical and auspicious occasion and it is my earnest hope and desire to see you and Mrs. Irani on this occasion in Teheran and to serve you both. How wonderful it will be to see you again. I am very much looking forward to it.

Now allow me to finish my letter with my very best wishes to you and to Mrs. Irani and to your son and pray to Yazdane Pak again and again for your happiness and prosperity.

Very sincerely yours
Sd./- A. Massoud-Ansari

"PARSIANA" is happy to announce the inclusion of Major Adarbad Irani on its panel of Advisory Board. His mubarak name will be welcomed by all. He is greatly respected in the profession and has a high social status in the Community. He is the President of the Iranian Anjuman of India and wields influence both here and in Iran, as can be seen from his connections. We welcome you.

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MISCELLANY

By

F A R D A



ARE ARYANS. To be an Aryan is a responsibility which is implied in its root "Aar" meaning straight or straightforwardness. Somehow life of a man is influenced by the soil from which he derives his living. The air he breathes there and the food grown in the soil become part and parcel of the man. His physiognomy gets the stamp of the general impression common to people of the soil. Even aliens change by long stay.

The people of Airyo-vej (land of the Aryans) ever remain anxious to stick to the noble path of their Daen-Din (Faith). They believe in "paityoget" (the law of just compensation), willing to pay for their misdeeds and eager to avoid kesas, for which they may have to pay later. Aryans are men of "Airichithra", of Arya-mithra and clean ideas. Such souls are helpful to Armaiti on Earth. Word "Turya" is opposed to Arya and means crooked ways or crookedness. Same ideas are implied in the words Iranian and Turanian.

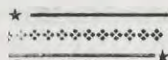
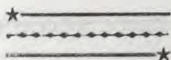
Aryans had concept of one and only God as the basis of their belief. Turanians had dualism. Aryans were settled agriculturists. Turanians were nomadic. Arya-mithra was altruistic. Turya-mithra had distorted their mithra to selfish aims. Airya Aryans were Iranians. Turya-Aryans were Turanyans with their turya = crooked and distorted mithra. In the word Turanian the element Arya represented their origin in the common mithra and the part Turya was applied to the human beings who discarded their Arya mithra and assumed crooked mithra. They were devyasnis and had their prayers in Adh-mathra. They were Un-Airya or Anarya later called anari (अनारी)

MATHRA & YESNA

These two aspects of Zoroastrian religious scriptures treat of prayers and rituals respectively. Mathra scriptures are always about prayers and incantations, about divine essences in them, which give "manthra" effect — some magical inexplicable effect. They are composed on principles of "stot-yesna" (in the tone and the breath of religious fervour) with praises of divine elements referred to therein.

Yesna scriptures treat of the form, formality of ceremonies and rituals and explain and direct the method for their correct performance. There are 33 aalaats (instrumentalities, not just an object or a weapon, but the essence of their inner purpose.)

In the preparation of a Yojdathregar he has to pass through the severe discipline which goes with the training and learning of scriptures. He has to accept the rigidity of self-discipline and get accustomed to live with and in an atmosphere of abstemiousness so that "ashoi" can grow within him. For developing and maintaining his "ashoi" on a high standard he has got to retain his "Barashnum", he is by duty bound. Even every pacca yojdathregar with his Parashnum intact is one of the aalaats. He is therefore indispensable to Zoroastrianism and is to be respected for the same reason.



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