The Magic Carpet

VOL. 13 NO. 10 THE STAFF MAGAZINE OF AIR-INDIA OCTOBER 1969

IN THIS ISSUE

CRYING NEED FOR HIGHER PRODUCTIVITY

DIFFICULT DAYS AHEAD

THERE is a crying need for higher productivity, for restricting the growth of staff and for modern management techniques. It is also necessary to streamline the organisation and make it lean and efficient.

This was stated by Mr.K.K. Unni, Assistant General Manager, in his inaugural address to the Administration Course at the Training College on September 16, 1969. His subject was Principles of Organisation.

Mr. Unni spelled out the aims and objectives of Air-India and analysed the Corporation's performance over the years in the context of the guidelines laid down in the Air Corporations Act.

Air-India has an excellent record of dynamic and self-generating growth. Its growth has been phenomenal since nationalisation with an unbroken record of profitability, he said.

"Air-India which functions in a highly competitive business", said Mr. Unni, "has strived to establish a sound financial base capable of meeting the challenges of this capital intensive industry, which is characterised by rapidly changing technology affecting the size and speed of aircraft."

Mr. Unni warned the days ahead are going to be difficult. "The costs of operation are continuously rising", he said, "and the revenue yields from traffic carried are declining resulting in a profit squeeze which is characteristic of the industry today." Emphasising the need for keeping the staff costs down Mr. Unni pointed out that salaries and allowances contributed the largest single item of expenditure accounting for over 29 per cent of our total operating expenses. He also stressed the need to redouble our sales efforts in order to increase the revenues.

"Air-India as a Public Sector undertaking and the national carrier has to fulfil certain social objectives and serve the nation", said Mr. Unni.

Spelling out these objectives, he said: "Air-India is engaged in a highly competitive business of international air transport. The Air Corporations Act has laid down that 'it shall be the function of the Corporation to provide safe, efficient, adequate economical and properly co-ordinated air trans-

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Management Services Division

A MANAGEMENT Services Division has been set up in the Head Office. It will be staffed by specialists in systems analysis, organisation and methods, operational research, work study, value and econometric analysis and consumer research.

Their job will be to apply the techniques of Management Science to analyse the working of Air-India as a whole and help the Management in decision-making by the application of quantitative methods and objective evaluation rather than by qualitative judgement and subjective evaluation.

New approach

The past two decades have seen the development of a new approach to decision-making in industry and business. Today decision-making is no longer an art or an inherited talent. It is a scientific process. And an invaluable aid in this process is the team of specialists who analyse the system, pinpoint weaknesses and suggest clearly defined alternatives and their implications. But at no time do they take over the decision-making themselves. It is not their job.

The Division's approach will be to analyse the existing system as a totality and not merely from the point of view of any one function of the Corporation such as production, marketing or finance. It will use expertise available within

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Some of Air-India's receptionists wearing the uniform designed by Jacques Esterel pose for a photograph in front of the Alcock and Brown memorial statue at London's Heathrow airport. Most of the girls chose the western style wool and polyester suit but Sarah Billimoria of Chiswick asserted her independence by choosing to wear the more traditional sari.

Welfare Fund

Study Grants announced

THE Air-India Staff Welfare Fund is to distribute a total of Rs.33,925 in the form of Study Grants to employees' children this year.

Of the 617 applications received, 593 eligible applications were considered by the Advisory Committee and 309 Grants were announced, including six to the children of ex-employees, on the basis of means-cum-merit.

It is interesting to note that of the 309 students selected this year, one has received the Grant continuously for the last six years.

He is Srinivasan (son of Mr. G.M.Ramachandran) who is now doing his First Year in Science. Ten students have been receiving the Grant for the last five years and six for four years.

It is also noticeable that the majority of the students who have been selected to receive Study Grants for University education are studying Medicine and Engineering.

Difficult days ahead

(Continued from page 1)

port service' and that 'the Corporation shall act so far as may be on business principles.

"In trying to fulfil the objectives of the enterprise, Air-India has to aim at the highest standards of safety and efficiency in operation equal to the best in the world, the very best service to the customer, and these aims can be achieved only by the 'pursuit of excellence.' We have from the very start tried 'to set our sights high and try to get the best of everything, to do the best job'. This was the ideal set before Air-India by the Chairman.

"The injunction under the Act that the Corporation shall act on business principles, has a deep meaning and significance. It is essential for the survival of the organisation and to ensure its steady growth that Air-India should achieve an adequate margin of profit on capital employed without which the enterprise cannot give a reasonable return on investment and also build up adequate resources for financing its continued growth.

"These objectives can be achieved only by the combined and determined efforts of all those working for the enterprise and, therefore, good human relations calculated to fulfil the aspirations of the staff and build up their morale which, in turn, increases efficiency and productivity, are most important.

Productivity

"All these objectives are interdependent and unless the business is run efficiently and profitably with a high level of productivity, the objectives cannot be achieved.

"The Prime Minister, in a recent address to the heads of the public sector undertakings, emphasised the pivotal role of the public sector in India's economic strategy. In a stirring appeal, the Prime Minister gave a sense of purpose to the men and women who are privileged to work for the public sector undertakings. The Prime Minister emphasised the necessity for 'dynamic and self-generating growth' of public sector undertakings and referred to the importance of achieving this goal."

In a brief survey of Air-India's finances against this background, Mr. Unni said, "The capital invested by the Government of India in Air-India is Rs. 26.8 crores since nationalisation. Against this, the Corporation has during the past 16 years ploughed back into business Rs. 30.97 crores from its internal resources as on March 31, 1969."

Commenting on the efficient operation of Air-India Mr. Unni pointed out: "It is significant that Air-India has been able to finance the purchase of its jet fleet mostly out of its own internal resources. Until March 31, 1969, Air-India had repaid US $46.53 million out of its own earnings, which amounts to the cost of nearly eight Boeing 707s. This performance is commendable.

The Corporation's fourth plan envisages an investment of US $120 million for the purchase of four Jumbo Jets and already loans to the tune of

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Management Services

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the Departments, as it must, but will mainly rely on the recognised scientific techniques of systems analysis, operational research, organisation and methods.

The Division will help in computerised short term and long term planning, schedules planning including routes and frequencies, punctuality, cargo handling, reservations, manpower planning, maintenance, project planning, inventory control, office systems and procedures.

The Division is headed by P. Jayant, who has been appointed Manager, Management Services. Jayant who holds a Master's degree in Mathematics and Statistics from the University of Bombay, started his career as a Scientific Officer in a Textile Research Institute. He later went to work for an Indo-Swiss firm of Textile Management Consultants and spent three years specialising in operational reserach.

His next job was with Binnys in Bangalore where he was the Systems Analysis Manager with responsibility for compu-

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P. Jayant

Jagdish Lal

ON THE JOB:

When Chargeman Dick Turner moved from the Engine Test House to Engine Disassembly, he brought a fresh eye to the problems in his new section. One of the problems which had defied solution was the removal of the valve seat of a Pratt & Whitney engine oil pressure filter housing. No one had been able to devise a satisfactory method for removing it.

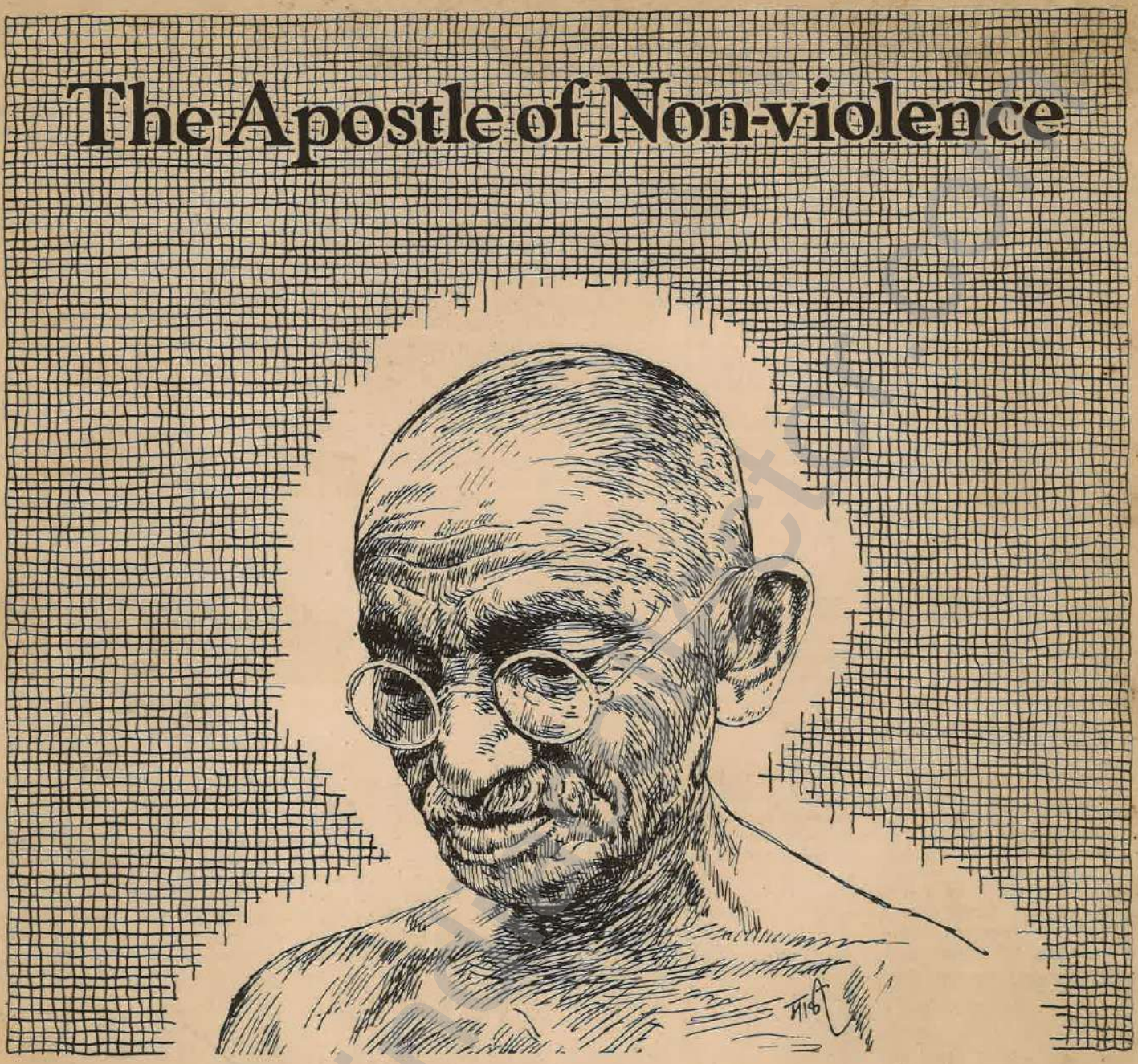
So Dick Turner designed a tool which has made the job simple and easy. He has won a Suggestion Award for it. He is 48 and has been with Air-India since 1946. He started his career as a Teleprinter Operator with Reuters, then trained as technician with the Air Force during the war. His favourite pastime is fishing.

Some people are more ingenious than others. If they encounter a problem they usually come up with a solution. Aircraft Technician Pesi Saklatwalla, belongs to this category.

Recently when he found that oil was being spilled during topping up of the Air Cycling Machine tank, because of difficult access. Saklatwala designed a filling tank which avoided the wastage. He has won a Suggestion Award for it. This is the second time he has won the Award.

Saklatwala, 51, joined Air-India in April 1948, after serving with Air Services (India) and with the Air Force during the World War II. A tough looking extrovert, he was a boxer in his younger days.

The Apostle of Non-violence



Consciously or unconsciously, we are acting non-violently towards one another in daily life. All well-constructed societies are based on the Law of Non-violence. I have found that life persists in the midst of destruction and, therefore, there must be a higher Law than that of destruction. Only under that law would a well-ordered society be intelligible and life worth living. And, if that is the Law of Life we have to work it out in daily life.

Whenever there are jars, wherever you are confronted with an opponent, conquer him with love. In this crude manner, I have worked it out in my life. That does not mean that all my difficulties are solved. Only I have found that this Law of Love has answered as the Law of destruction has never done

MAHATMA GANDHI
Young India, October 1, 1931

Sketch by Mali —Courtesy Maharashtra Times—Page designed by Design & Print Services

How to keep your heart young

Dr.K. K. Datey, the eminent Cardiologist, recently gave the first in a series of lectures on health to Air-India executives at the Bombay House auditorium. Dr.Jal Patel, Chief Medical Adviser to Air-India was in the chair.

Introducing Dr.Datey and the lecture series, Mr.K.K.Unni, Assistant General Manager, said: "A company has many kinds of assets. Perhaps the most important of its assets—and one which is not reflected in its financial reports—is its staff.

"You can buy the best equipment, machinery and in our case the aircraft off the shelf, but you cannot buy trained and experienced staff. It takes years of training and experience to develop managerial personnel.

"This is one reason why almost every progressive organisation wants to take care of its executives so that they maintain their health and are able to give their best to their work."

Following is an abridged version of Dr. Datey's lecture:

Dr. K. K. Datey

THE only problem is HOW! For deaths from heart disease, particularly heart attacks have reached the top of the list of deaths from all causes. Cardiovascular disease in the United States of America accounted for 25 per cent of all deaths and in 1955 it had steadily climbed to 55 per cent. And to-day, it is soaring to a much higher mark. What is more, it looks as if it is going higher and higher. In Bombay, the figures for heart disease are catching up with the times. In 1950, heart disease was the 9th killer, in 1960 it was the 3rd.

There are number of diseases which ravage the heart. But none of them is as frequent and as important as coronary artery disease, the one which leads to heart attacks. The coronary arteries are the ones which carry blood to the heart muscle itself. When they don't, or cannot carry as much blood as the heart needs, the heart muscle cries out in pain. This is the pain called angina. If the blood flow to the muscle is further reduced there is a heart attack.

The coronary arteries hold the key to the problem. They have to be a hundred per cent fit at all times. What makes them unfit? Two things above all others, one is arteriosclerosis and the other a high blood pressure.

Most of us are born with pressures around 80/50 mm. Hg. But as we grow up, the blood pressure follows suit and in a normal adult is about 120/80 mm. Hg. Higher pressures strain the pump (heart) and arteries.

High pressure

First of all, and this is something you cannot help, it is your parents. If one of them has a high pressure, you have a 25 per cent chance of having it too. And if both your parents have it, then you are doomed, the risk is over 70 per cent.

There are certain races too who have a higher predilection for high pressures. But it works the other way too. And if you happen to be a Filipino, a Chinaman or an African Negro the odds are that you will enjoy a nice low pressure. If you are Indian you are also lucky, at least from the point of view of blood pressure.

It is not all Negroes who have low pressures. The ones who live in America don't. And that brings up the point that it is not only race which matters, but also where you live, how you live and your attitude towards life and to the frustrations it inflicts on you. There is no doubt that those of us who are able to "play it cool" are able to keep our pressures much lower than those of us who are obsessional perfectionists. That laissez-faire attitude is worth cultivating for keeping the pressure low.

If you really can't, here is some news for you. There are some Yogic exercises which can do the trick and help you to relax your mind and body provided you do them every day, the right way.

What you eat also matters. SALT is the biggest thing that counts. If you are for ever pouring salt over your food, if you are unable to swallow anything without ketchups, pickles, popadums and all the other etceteras, then look out for a rising pressure. The Japanese do, their passion is salt, masses and masses of it, in all their food. And they have a very high death rate from very high blood pressure.

Tobacco in any from is best avoided and reduce your weight if you are overweight.

Arteriosclerosis is hardening of the arteries, together with narrowing. From being fairly straight, they become like corkscrews. There is deposition of fatty material under the inner lining of arteries. All this adds up to one thing only, the amount of blood going through them becomes less and less. Finally it may stop altogether. The heart muscle thus gets less blood than it has to have. Finally when it is further reduced there is a heart attack.

This hardening and narrowing does not happen at once, it may take years. But once it starts, there is no stopping it, unless you can change a number of things which cause it.

One of the things that cause it is heredity and of course you can't change that. But if you know that it is in the family you can start being twice as careful to avoid it.

Diet

The changeable things in your life are first of all the diet. Too much of it, or too much of fat in it, both mean arteriosclerosis. This is where the have-nots score over the haves. For the haves indulge in more calories than they can manage, and moreover take 40 per cent of their calories as fat. The fats that are particularly bad are the animal ones. This does not mean only meat fat and lard, it means also cream, butter, and ghee. So the vegetarians have to watch it too. These are technically called the "saturated fats". And there is one more thing, and that is cholesterol, technically it comes in the group called "lipids" and this too is bad for arteriosclerosis. Cholesterol comes in yolk of egg, liver, brain and fish roe.

Wherever it comes from, this excess fat cannot be "managed" by the body. It is dumped inside the wall of the artery, just under the lining. And it narrows the arterial channel. Then calcium goes into this fat and makes the arterial wall hard as well as its lumen narrow.

Of course you cannot live altogether without fat, you must have some, and indeed you can. But it has to be what is called "unsaturated fat", particularly ones with a higher content of Lenoleic acid. Therefore, the oils to be preferred are Safflower, til, maize, cottonseed, etc. Fortunately all these are to be had in India, and all of them are cheap, at least relatively so. But they must be used as oils, not as hydrogenated vanaspati (vegetable ghee) or margarine. For the process of hydrogenation converts unsaturated fat into saturated one and, therefore, it is totally useless for preventing arteriosclerosis.

Exercise too helps, for it uses up excess calories and prevents fat from being laid down in the wrong places particularly inside the walls of arteries.

Being overweight, having diabetes and not taking care of it, smoking, are all don'ts, strict don'ts. It is imperative that high blood pressure should be adequately controlled as high pressure accelerates the process of hardening of arteries. Mental stress should be avoided. Yogic exercises to reduce mental and physical tension are very useful.

Take care of your heart, keep it young, and your age will matter no more. It is true that you are as old as your heart and blood vessels. Your heart will serve you well, if you treat it well.

Goodbye and good luck

MR. A.F.Pinto, until recently our Regional Manager-Australasia, has resigned from Air-India after nearly 25 years service with the Corporation.

Mr. Pinto who joined Air-India in Karachi in 1944 was posted to Sydney in 1957 from Bangkok. He was largely responsible for building up our Australasian operations. In the intial stages the Air-India office consisted of only two members of the staff. Since then, however, he opened 10 offices in the region—five in Australia, three in New Zealand and two in Fiji. The number of staff rose from two to more than 100. During the same period the revenue climbed from US $200,000 to more than US $4 million.

In the last five years Mr. Pinto and his staff concentrated all their efforts towards building up our service to Fiji against tremendous odds.

In the 12 years that Mr.Pinto has been in Australia, his main preoccupation has been promoting India as a tourist destination for Australians. He succeeded in removing many misconceptions about India in that country. Through an imaginative advertising and public relations campaign in which he took a personal interest, he helped to project a better image of India in Australia.

A man with unbounded energy and charm, Mr. Pinto has the uncanny gift of seeing through a problem and the capacity to carry the staff with him. He will be missed by his colleagues in the Corporation and his large circle of friends in the travel trade in Australasia.

The Magic Carpet wishes Mr. Pinto and his charming wife all the blue skies in the world.

Mr. A. F. Pinto greets his successor Mr. D. P. Mitra in Sydney.

Management Services

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terising production planning control of finished goods.

From Binny, Jayant moved back to Bombay and worked for Hindustan Lever as Manager, Operational Research, before coming over to Air-India.

He will be assisted on the Organisation and Methods side by Jagdish Lal. A Science and Engineering Graduate from Sagaur University and the Indian Institute of Science, Bangalore. Jagdish holds a Diploma in Works Study and also in Industrial Engineering. After three years with the Ahmedabad Electrical Company he joined IBCON, a firm of Management Consultants in Bombay, before coming to Air-India.

The new High Commissioner for India in the U.K., Mr. Apa B. Pant photographed with his family on arrival in London on our flight AI-107. The High Commissioner was met by the Deputy High Commissioner and Senior Air-India officials.

A Silent Rider

Away from the abyss engulfing me,
Like a wild stallion I spur on—
Brushing, rushing to yonder field,
To clamp unfettered, alone
Always alone—stopping besides a white mare
But stopping, stopping only to discover
She was a nightmare,
And so,
Bucking and Buckling off I go
To pastures new, pastures green
But always,
A Solitary Rider!

— Air Hostess Meher Heroyce Moos

Difficult days

(Continued from page 2)

US $93 million have been raised for financing three aircraft on order. The interest rate on foreign loans is rising and the repayment period getting reduced.

Turning to the organisational aspects of Air-India, Mr. Unni said that an organisation consists of people. The character and competence of the people working for the Organisation will determine its efficiency and success. Mr. Unni pointed that Air-India has tried and is continuously trying to build up its management cadre and its task force and give them necessary training and meet the challenges of the days ahead. There can be no permanent blueprint of an organisation for fulfilling the the organisation has to adjust objectives of the enterprise and itself to the dynamic environment of the industry and also adopt the latest techniques of management. The traditional concept of the manager was being out-dated fast by big changes in the environment and in managerial techniques. In this context, Mr. Unni referred to the establishment of the Management Services Division in Air-India and the development of new approaches to decision-making in industry and business.

Mr. Unni emphasised that it was necessary for managers at all levels to keep abreast of modern techniques of management without which it would not be possible to function efficiently and profitably in the competitive business of air transport.

Singapore New Office

OUR Administrative, Sales and Accounts Sections have now moved from the Adelphi Hotel building to the brand new MSA building. Air-India has taken the entire 8th floor which commands a panoramic view of the Singapore harbour as well as the city. Special furniture, paintings and murals were flown from Bombay to decorate the new office. A cocktail party was given to Agents and Interline people to celebrate the move to our new office.

Wedding bells rang loud in Singapore recently when four of our staff finally decided to give up their 'gay' bachelorhood. It began with Sunder Raj, our Airport Manager, who was followed by Munusamy, Lim Sze Hock, our Teleprinter Operator and Ravi Misra, our Asst. Manager.

Our congratulations to Karasu and his wife Renuka who now have a second son, and also to our District Reservations Manager, Rajan, whose first daughter was born on June 6.

Human relations

Tricks have no place

By T. K. P. Pillai,
Chief Instructor, Training College

HUMAN relations is nothing but your relations with people. Hence what counts most is "what you are" and not "what you pretend you are". What you are and what you pretend, are sooner or later known to your people. No matter what category of people you deal with in everyday work, the gap between feelings and words is revealed.

Very often what is unspoken is more noticed than what is spoken. The Supervisor who pretends that he is involved or concerned while he is nursing negative feelings about his subordinates will soon head for trouble, no matter how well he knows the human relations techniques.

Right attitude

The teaching of human relations should be based on both, psychology and sociology. The right attitude also must go with the right techniques. Attitude is based on one's state of mind and thinking. When a Supervisor holds a certain opinion about his subordinate, he cannot conceal it by human relations techniques.

A Supervisor who uses psychological tricks in order to get work done will never succeed with his men. Proper human relations can exist even when a Supervisor has to criticise, reprimand or punish his subordinates. What the Supervisor needs is empathy—seeing things also from his subordinates' view and treating them like human beings and not like machines. Sincerity is the core of human relations and its absence is noticed.

Techniques

A Supervisor should know the human relations techniques, but basically what he should do is to establish a climate of trust within which he can use these techniques. The application should not be mechanical. The mistake often lies in the misconception that one can learn these techniques and apply them without regard to one's attitude towards the subordinates.

This does not mean that human relations training has no place in industry. The object of training is to acquaint the Supervisors at all levels with the pattern of human behaviour and how people react under various conditions. The knowledge of this will assist Supervisors in their day-to-day contact with people and communications. With carefully designed training programme in human relations, the participants will be able to acquire skills, knowledge and attitudes which will improve the way in which they will supervise their subordinates.

Above, Lim Siew Lan to Lim Sze Hock, Teleprinter Operator, Singapore. Below, Geeta to Sunderaj, Airport Manager, Singapore.

We welcome the latest additions to the staff—Receptionist Aruna Devi, Secretary Sheila Mathews and Junior Sales Representative John Ngoei.

Behram Vakil, our DSM, attended the Lions International Convention at Tokyo in June as a delegate of the Lions Club of Singapore.

INSTANT FLIGHT DESPATCH

How computer does it

By K. S. Mhatre

Precision and accuracy in flight planning is becoming more and more important in these days of high aircraft operating costs. When the airline economies are balanced on the thin edge of a knife, a saving of even five or ten minutes in flying time and the consequent saving in fuel costs is vital. Major airlines are therefore switching over to computer flight planning. For its trans-Atlantic flights, Air-India has switched over to computer flight planning. The article explains how this is done.

SOME 20 miles out of New York in the Long Island suburb of Manhasset stands a low unpretentious building, just off a tree-lined avenue. Outwardly there is nothing about it to suggest even a remote connection with aviation. But even inside a visitor will find few obvious clues to the nature of the work being done.

Lights twinkle on computer panels, teletypes clatter away incessantly and the staff go about their business with a quiet efficiency. There is no sense of hurry or urgency. Yet it does not take one very long to discover that this computer room is as closely connected with aviation as the New York air traffic control centre and is nearly as busy in 'despatching' flights.

For this is the Computer Centre of R. Dixon Speas Associates, where flight plans for more than a dozen major international airlines, including Air-India, are prepared every day.

Preparing a flight plan for a modern jet airliner is perhaps the most complicated and time-consuming pre-flight task. For a North Atlantic flight, it takes anything upto four or five hours for a Flight Operations Officer to work out the numerous details of a flight plan—track, altitude, wind, speed, time and total fuel.

"A computer can do all this in a matter of munites," said Mr. K. Govindan, our Chief Flight Operations Officer. "It can sift through a mass of figures related to upper air, examine hundreds of routes and select the best after taking into consideration all the factors, and once you feed the route, it can work out the complicated mathematical problems involved and print out a detailed flight plan", he added.

Its greatest advantage, of course, lies in its speed which enables it to use the latest available weather data and thus produce a flight plan which is both precise and accurate.

Now, this precision and accuracy in flight planning is becoming more and more important in these days of high aircraft operating costs. When the airline economies are balanced on the thin edge of a knife, a saving of even five or ten minutes in flying time and the consequent saving in fuel costs is vital. Major airlines are therefore switching over to computer flight planning. Air-India itself has been using the services of R. Dixon Speas Associates (RDSA) for over a year now is for its trans-Atlantic flights.

The North Atlantic is the busiest air route in the world and also the most organised from the point of view of the air traffic control and weather services. But because every airline wants its aircraft to fly within the shortest possible time, all the aircraft tend to fly along a narrow crowded aerial highway.

It has no more than four or five lanes either way. These are determined by the Shanwick (Shannon and Prestwick) Control on the eastern side of the Atlantic and the Gander Oceanic Control on the Western side and assigned every day in the form of advisory tracks. Shanwick works out the westbound tracks and Gander eastbound. These tracks, which are based on the most favourable wind and pressure patterns,

(Continued on the next page)

HEADING PICTURE: The computer room of R. Dixon Speas Associates at Manhasset, Long Island. Senior Flight Operations Officer Mr. Alex David (R) and Flight Operations Officer Mr. R. S. Keshavan are seen with Mr. John Keats, in charge of operations.

(Continued from the previous page)

shift from day to day.

An interesting phrase which keeps on cropping up in the flight planning jargon is the MTP—Minimum Time Path. Briefly, this means a route which will take least time to fly. Now, you and I believe that the fastest way to get from A to B is fly along a straight line which is the shortest distance Well, not always. If the winds are unfavourable this can actually take you longer. So what the Flight Operations Officer concentrates on is the total flying time involved rather than the distance.

Weather

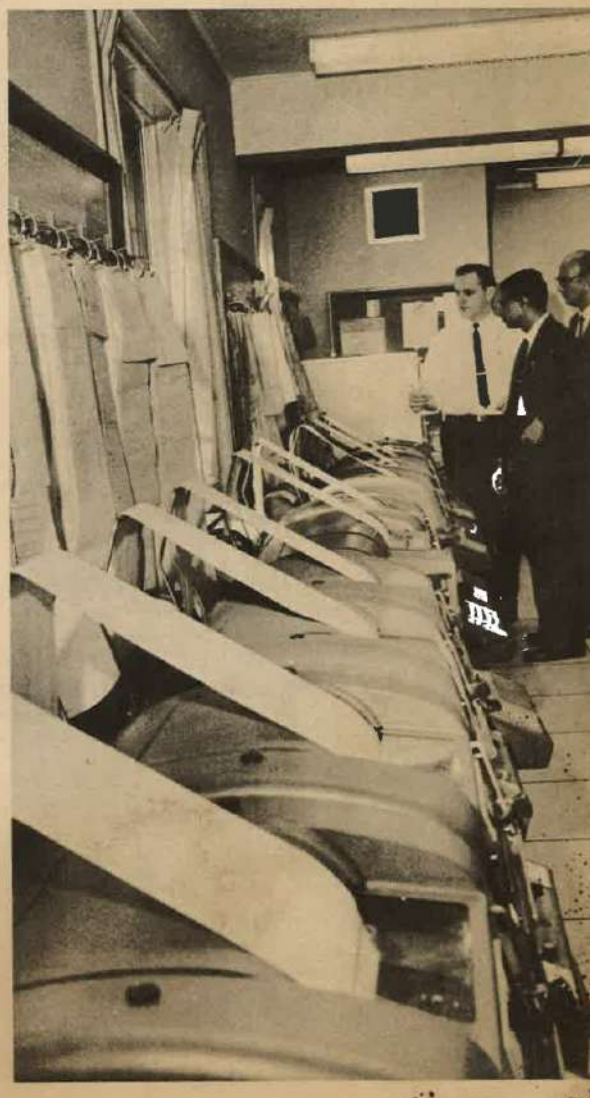
Weather, of course, plays a crucial role in flight planning. As a matter of fact the accuracy of the flight plan entirely depends on the accuracy of the weather data. The RDSA Computer Centre in New York is therefore directly connected with the United States Weather Bureau near Washington which provides continous weather forecasts for the entire northern hemisphere.

Besides the 30-hour forecasts issued every 12 hours, the Bureau also sends out detailed weather charts every six hours. This information which comes on a tape is fed into the twin RDSA IBM 360-30 computers. Also stored in the computer memory core are the details of our fleet along with those of other airlines—types of aircraft, their registration markings and performance data.

Although the preparation of an actual flight plan takes only about two minutes, the process begins several hours earlier. Take, for instance, our daily London-New York flight. For this flight the RDSA Computer Centre in New York works out the Minimum Time Path after analysing the precise wind directions and velocities and temperatures at various heights, and sends it out to our Flight Operations Office at London Airport around 0500 hours GMT, almost seven hours before the flight is due to leave London. This is followed by the time-and-distance analysis of the advisory tracks issued by the Shanwick Control.

Having received this information, the Flight Operations Officer then has to make a crucial decision, which will test his judgement and experience, especially if the Minimum Time Path worked out by the New York Computer Centre does not coincide with any of the advisory tracks. He will then have to select a track which comes closest to the MTP, after taking into account the exit points from London's controlled air space, the en-route weather, including clear air turbulence and the aircraft's capacity to maintain the desired altitude with the necessary payload. He must also consider the penalties imposed by noise limitation procedures and other operational requirements. In short, it is his job to ensure that the aircraft will carry maximum payload with minimum penalities.

Above left. Mr.John Keats of RDSA at the IBM 360-30 Computer used in flight planning. Below left, Mr.David and Mr.Keshavan seen with one of the RDSA staff. The cards on which the flight planning data is punched can be seen in the centre. Below, the line-up of teletype machines at the RDSA Computer Centre. On the wall are copies of the flight plans of various airlines.



By about 0700 hours GMT, the Flight Operations Officer will have decided on the primary and secondary tracks. He then sends out a message to the RDSA Computer Centre requesting detailed flight plans for the two routes, providing such details as the flight number, aircraft registration, fuel on board, take-off weight, commander's name, the route to be followed and the alternate airport...

Request

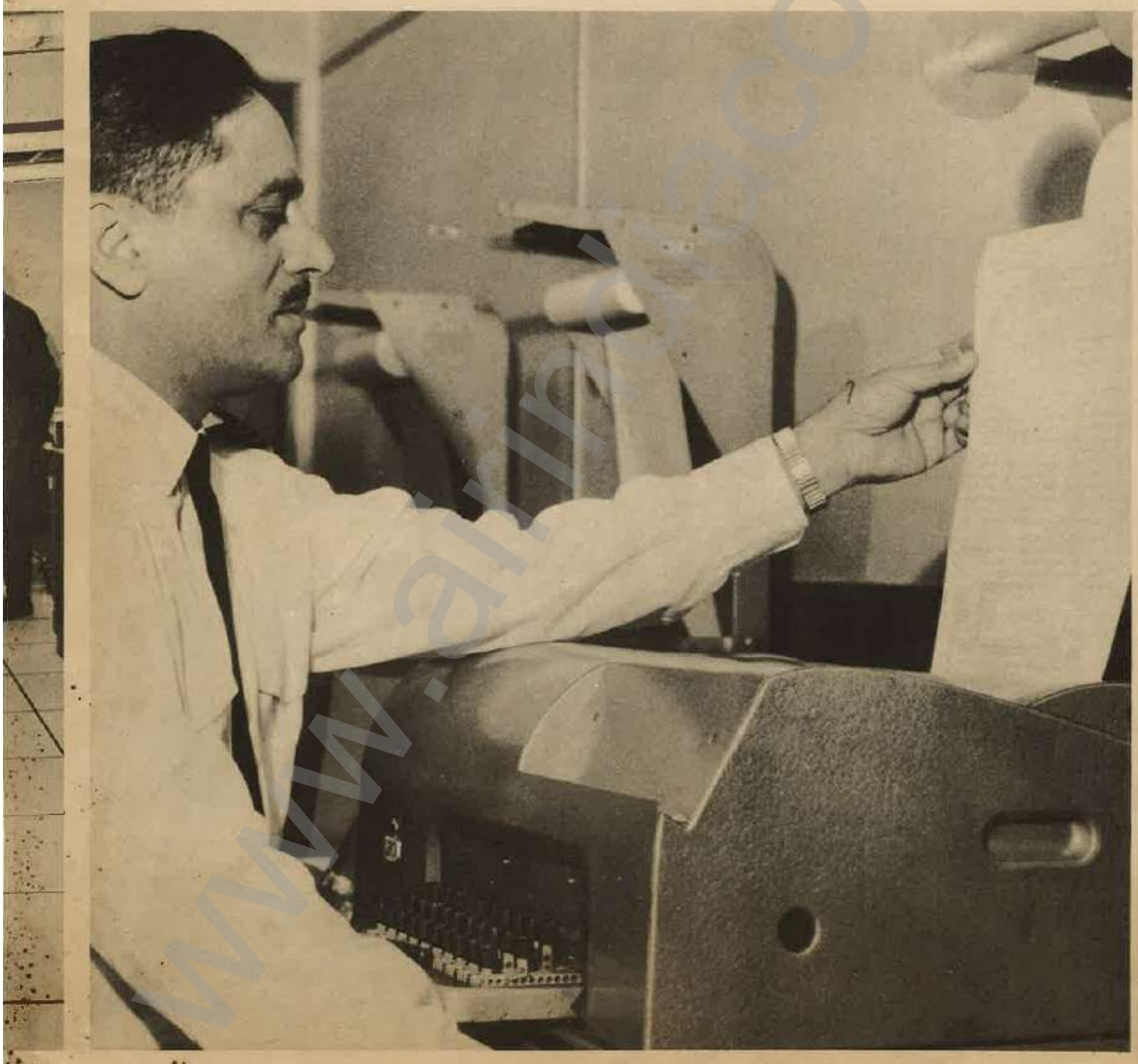
At the RDSA computer centre, the request will be automatically translated into a special format and fed into the computer. An interesting point at this stage is that the computer checks, with the aid of its memory core, whether there are any inconsistencies in the information. For example, if it finds that the registration marking given is wrong or there is discrepancy in the performance data, it will immediately point out the error printing out a message.

Mr. John Keats of the RDSA who is in charge of the operations and who showed me round the Computer Centre demonstrated how this happens. He deliberately introduced an error into an Air-India flight plan under preparation. Sure enough, the computer picked the error.

The computer takes only 45 seconds to do its checking. If everything is correct, it starts with its long and elaborate process of preparing an operational flight plan which contains the details of courses to steer, winds, safety heights, fuel flow, fuel burn off, altitudes, speeds, distances, elapsed time, direct operating cost of the flight, and host of other details. A similar analysis is also worked for the secondary track.

The computer punches out all this information on a stack of cards which automatically go through an IBM 1912 Telegraphic Card Reader linked to a teletype machine which in turn transmits the flight plans to our

Right, Senior Flight Operations Officer Mr.K. L. Dandona, who is in charge of our trans-Atlantic flight operations at London, studies Met conditions enroute on an upper air chart brought in by the Briefing Assistant Mr.Krishna Rao (R). Below, Mr.Dandona looks at a flight plan being received from New York on the teletype machine.



London or New York Airport Flight Operations Offices (as the case may be) through Airinc and our own telex system.

By 0900 hours GMT the flight plan is received in London, which is then filed with air traffic control for clearance. In the meanwhile the Flight Operations Officer gets busy filling out special cards for the pilot, navigator and flight engineer. Each card carries information of specific use to the particular crew member. For instance, the pilot's card contains such take-off data as the altimeter setting, temperature, runway length required for take-off and the various speeds to be achieved during take-off. He also prepares a weather chart showing significant weather enroute, including areas of clear air turbulance. This done he is ready to brief the crew.

Routine

On the other side of the Atlantic in New York exactly the same routine goes on every day, with the RDSA providing the Minimum Time Path and oceanic track analysis by mid-morning and the complete flight plan in the late afternoon for a 2030 hours (I.T) take-off.

Our London Flight Operations Office is divided into two sections, one dealing with the eastern routes, for which flight plans are prepared manually and the other dealing with the trans-Atlantic route. It is head-

(Continued on the next page)

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ed by Operations Officer Mr. Moses D'Souza, a former Radio Officer and veteran of 26 Air-India years. His counterpart in New York is Senior Flight Operations Officer Mr. Alex David, also a former Radio Officer and Navigator who has been 21 years with Air-India.

A question which naturally comes to mind is: now that the first steps towards computer flight planning has been taken, does it mean that the Flight Operations Officers as we know them today will be redundant?

"The answer is, NO," said Mr. Govindan. "Since the advent of jets more than ten years ago the emphasis has shifted to flight operations handling rather than mere flight planning."

Mr.Govindan pointed out that Flight Operation Officer's ability and judgement are put to test everyday—in selecting an optimum route, correct anticipation of terminal weather, rendering correct advice to the Commander in the event of marginal weather conditions and ATC delays, which have become much more frequent at international airports like Kennedy Airport.

"In fact, he is a vital link in safe and economic operation of aircraft", he said.

Above, Mr. Dandona shows the primary and secondary tracks to Capt. N. J. Shroff (R) at London.

Below, Mr. Dandona and Flight Operations Officer Mr.D.S.Thandi (R) briefing the crew at the Flight Operations Office at London airport.

News Round-up

Farewell to Mr. D. M. Desai

MR. D. M. Desai, former Deputy Controller of Accounts was given an affectionate farewell by the staff of the Accounts Department at the THQ Canteen on September 2, 1969.

Present on the occasion were Mr. C. V. R. Rao, Financial Controller, Mr. N. J. Pavri, former Financial Controller and other senior officers of the Accounts Department.

Although Mr. Desai retired in September 1967 after 30 years service with the Corporation, he served in an advisory capacity to the Accounts Department for a year afterwards.

Mr. C.V.R. Rao praised the services of Mr. Desai and said that he had particularly admired his simplicity, unassuming nature and analytical mind. Mr. Pavri, who also spoke on the occasion, recalled his long association with Mr. Desai. Everyone joined in wishing Mr. Desai a long and happy retired life. A hand-painted dinnet set was presented to Mr. Desai on behalf of the Accounts Department staff.

●

... And to Mr. Fernandes in Rome

STAFF in Rome bade farewell to Mr. Sydney Fernandes, Asst. Manager, Rome, and Mrs. Fernandes at a typical Pizza party held on the outskirts of Rome on August 29, 1969.

Mr. Bolasco, Sales Manager, Italy, presented Mr. and Mrs. Fernandes with a florentine silver salver on behalf of the staff in Italy, and wished them goodluck in their new assignment in Geneva.

Mr. Fernandes thanked the staff and said that his four years in Rome would be indelibly inscribed in his memory.

●

Visit India

ONE of the largest travel-agents in Trieste, Messrs Ufficio Centrale Viaggi, in collaboration with Air-India, and the Tourist Department, launched a "Visit India" campaign during August. Their office in the centre of the City has one of the most attractive window displays and passers-by often stop by to have a look at it.

●

Buy now, no payment

FOLLOWING the recommendations of the Labour Relations Committee and the Standing Medical Committee, the Management have made arrangements with the Air-India Consumers' Co-operative Society and Messrs. Akbarally in Bombay to privide medicines on credit to staff against prescriptions by the Corporations' Medical Officers. This arrangement will continue till September 15, 1970.

●

Top, Mr. C. V. R. Rao, Financial Controller, speaking at the farewell party to Mr. D. M. Desai. Also seen in the photograph are (L to R) Mrs. Rao, Mrs. Desai, Mr. Desai, Mr. N. J. Pavri, former Financial Controller and Mr. P. K. Balaporia, Dy. Controller of Accounts. Above, the large gathering of Accounts staff who attended the farewell party.

HISTORIC OCCASION: Our Boeing 707 made the first ever flight to Port Moresby recently. Air-India and Ansett staff pose for a photograph in front of the aircraft before departure. Mr. R. Pennock, DSM Brisbane, and Mr. J. N. Rao, Station Engineer, Sydney, are seen on the left. Mr. J. Aleck, Airport Manager, Sydney is fifth from left. ▼

Maharajah to New Guinea

THE Maharajah added Port Moresby, the capital of Papua and New Guinea, to the long list of airports he has visited around the world.

The opportunity came when the Fijian Amateur Sports Association chartered our Boeing 707 to fly their competitors and officials for the third South-Pacific games at Port Moresby.

Mr. R. Pennock, our District Sales Manager, Brisbane; Mr. J. N. Rao, Station Engineer, Sydney and Mr. J. Aleck, Airport Manager, Sydney, had flown specially to Port Moresby to supervise the handling

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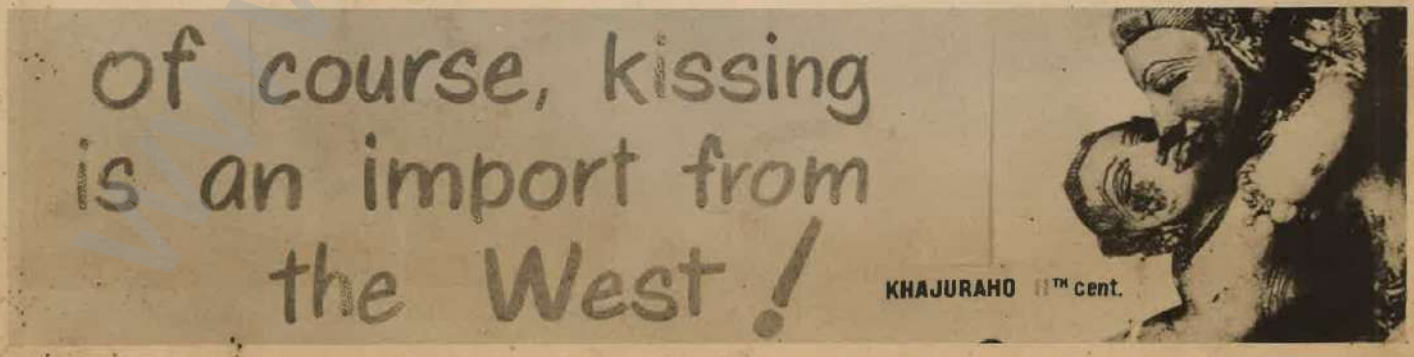
At Nariman Point



AUSTRALIAN RULES FOOTBALL

Roughest, toughest and fastest game

By R. K. Sattawalla

THE World's roughest, toughest and fastest ball game will be played for the first time in India when two of Australia's greatest football clubs, East Perth and Subiaco, arrive by an Air-India service to demonstrate Australian Rules football in two exhibition matches at the National Stadium in Delhi on October 18 and 19, 1969.

In Australia the Rules Football is more a religion than a sport. It is a fiercely-fought, essentially he-man's game in which there is no place for anybody not prepared to run the risk of a serious injury which can put him out of action for weeks, even months.

Flying foot

One nervously holds breath at the sight of players throwing themselves full-length to pluck the ball away from a rival's flying boot. One slight error of judgment could result in a fractured skull. With 36 men engaged in fierce bone-jarring physical clashes, tempers are often frayed and it is not unusual for wild fisticuffs to break out often. Truly, an Australian footballer must be able to fight as well as he plays football.

The Australian Rules game is very fast and it is not unusual for a team to score within 20 of seconds of a score being registered at the other end of the ground. Some players have developed their kicking prowess to such a fine art that they are able to kick the football over distances up to 60 and 70 yards. The Australian record for a distance kick is 93 yards.

An interesting feature of the game is high scoring. A goal is scored when the ball is kicked between two tall posts each seven yards apart and a behind (or one point) is scored when the ball goes between seven-yard opening on either side of the goal mouth. Six behinds equal to one goal.

While Australian Rules football incorporates most of the best features of soccer and rugby, it has also many features of its own as Indian sports fans will find. Unlike hockey and soccer there is no offside rule and the players can run, play or kick in any direction within the oval's boundary. The aim of the Australian Rules football is to transfer an oval-shaped ball which resembles a rugby ball by kicking or handball from one player to another down the field to the goal-line.

Opposing players are allowed to physically tackle each other in an attempt to obtain the possession of the football. None of the players in the game wear any padding or protective clothing as do the American grid-iron players.

Arena

Australian Rules demands the biggest playing arena of any sport in the world. It is played on an oval-shaped ground measuring from 150 to 200 yards in length and 120 to 170 yards in width (ideal size 180 x 150 yards). At the start of the game and after each goal scored the ball is bounced in a 10 ft. diameter circle in the centre of the ground. Duration of the game is four quarters each of 25 minutes and the players change ends after each quarter. (There is a 15-minute rest period after the second quarter and 3 minutes rest between other quarters.)

Each team fields 18 players —the greatest number of players on the field in any football game. In addition, there are two reserve players who can be used to replace injured men, but once a player has left the ground he cannot return. The players are spread across the ground in three-man lines, ranging from the back-line to half-back to centre-line to half-forward to full-forward.

The centre-line consists of three men set across the ground —wings on the oval's boundary and the centreman positioned at the centre point. In similar lines across the ground are the half-back and full-back lines of the players. The player directly in front of his team's goal is known as the "full-forward" and it is usually his responsibility to obtain and kick goals. The "full-back", as in Rugby Union, attempts to prevent the opposition from scoring goals. Australian Rules football allows any player to move anywhere.

If a player kicks the football and it is caught, without being

(Continued on page 11)

The players leap over the heads of their rivals to catch the ball, somersault in mid-air and and without a broken neck.

In this spellbinding, action photograph players throw themselves full length to pluck the ball away from the rival's flying boot. The Australian Rules football has all the ingredients necessary to capture the imagination of those who delight in fast moving skilful (and rough) games.

FOOTBALL

(Continued from page 10)

touched by another player, the player catching the football is awarded a "free-kick". The player who has been awarded the "free-kick" then kicks the football to his team-mate in a similar fashion while directing the ball towards his team's "goal-line".

Members of the opposing team endeavour to prevent such a player obtaining possession or kicking the ball effectively. If an opposing player successfully wins possession of the football then he, in turn, attacks towards his goal in a similar manner. The game is won by the team that kicks the most points.

Fair Play

Opposing players are allowed to physically tackle each other in an attempt to obtain possession of the football, but this is restricted by several rules. The majority of these rules deal with fair play, but they still allow for fierce physical clashes between the opposing players. Tripping, pushing in the back, grabbing around the neck, punching, hacking or elbowing are not allowed and this rule is strictly enforced by the field umpire. Any illegal form of tackling is penalised by a "free-kick" against the offending player.

Kicking is the main method of transferring the football from player to player, but "handball" may also be used. However, throwing the football is not allowed and a player must punch it clear from one hand with another. The Australian Rules code, unlike that of Rugby Union, allows the player to "knock" the football ahead to a fellow team member either from off the ground or in the air.

Rivalry

Major games in Perth attract crowds up to 46,000 during the winter season and there is close rivalry between Western Australia, South Australia and Victoria for the title of premier football State of Australia. Victoria, with a far bigger population and greater ground capacities, draws more than 100,000 people to its final-round matches each year.

Though the game is not fully professional in any Australian State, most players can make at least AUS $50-60 a week for playing on one day (Saturday) and the champions can make twice that amount and receive the sort of Press, radio and television adulation seldom enjoyed by even the foremost sporting heroes in India.

Spare time? Get a degree

The following members of the staff have acquired academic qualifications in the year 1968-69.

Degrees

Mr.P.V.Shivraman,
(Engineering)
LL.B.,
University of Bombay.

Mr.L.G.Khatri,
(Accounts)
B.Com.,
University of Bombay.

Mr.B.S.Hirlekar,
(Accounts)
M.A.,
University of Bombay.

Mr.R.J.Moses,
(Accounts)
B.A.(Hons.),
University of Bombay

Mr.R.T.Sartape,
(Accounts)
M.A.,
University of Bombay.

Mr.H.B.Shetty,
(CHQ.-Admin.)
B.A.(Hons.),
University of Bombay.

Diploma

Mr.Hector James Paul,
(Commercial)
Hotel & Motel Management
Int'l Correspondence Schools
Sydney.

Certificate

Mr.P.D.Agarwal,
(Engineering)
Social Service League,
Bombay.

Mr.K.S.Krishnamurthy,
(Engineering)
Social Service League,
Bombay.

Mr.P.G.Lekshmanan
(Engineering).
Navigation & Operation,
Associate membership exam.
of AeSI.

Mr.H.J.Mirchandani,
(Engineering)
Fortran Four Programming,
Builders Associates,
Bombay.

Mr.S.U.Shenoy,
(Engineering)
S.S.C.,
Poona S.S.C.Board.

Mr .A.K.Krishnan,
Commercial (Delhi)
Russian Language, Institute of
Russian Language, Delhi.

WHO'S WHO & WHERE

Promotions

ENGINEERING DEPARTMENT	**TO**	**S. N. Nayak,** Bombay.	Asst. Supdt., Stores
A. Y. Chaubal, Bombay.	A. M. E. II	**G. M. Dandekar,** Bombay.	Asst. Supdt., Stores
STORES DEPARTMENT			
L. Palha, Bombay.	Asst. Supdt., Stores	**V. A. Nair,** Bombay.	Asst. Supdt., Stores (Offig.)

Above, a group of Sydney Travel Agents examines the finest collection of fashion, jewellery, handicrafts and antiques ever brought to Australia. The exhibition which was held at the Wentworth Hotel Sydney, was flown to Australia by Air-India. Mr. John Leech of Air-India is on the left. Right, Miss Rosalind Young, Sydney's Chinese Dragon Festival Princess, about to board the Air-India Boeing 707 for Fiji. Miss Young was on her way to Fiji to attend the annual Hibiscus Festival.

Above, Van Shipley, the wellknown guitarist, and his troupe at Bombay Airport before leaving for Mauritius on our service. Below, Sir Sewoosagur Ramgoolam, Prime Minister of Mauritius and Lady Ramgoolam seen on arrival in Mauritius on our service.

Photo News

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