

Inaugural Address — Aero Medical Society Meeting, Dec 1978

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SINCE 1945, and more so in the last two decades, aviation and space technology have taken such tremendous strides that the common man tends to think in terms of full automation as the logical outcome. We know that some of these developments have far outstripped the capability of the human being to react to them in real time. And yet, it is the human being that has the discriminatory powers, the ability to weigh up the pros and cons of the various courses of action available and use his judgement to fit the situation. That is why we continue to employ aircrew in overall control of the machine. In the field of aviation, it is the aircrew who have to deliver the goods and, therefore, they must be the strongest force in any programme which aims at higher efficiency while at the same time ensuring greater safety of operation.

When an accident or incident occurs, somewhere along the line there is a human being. It is a human being who writes out the specification, turns it into design which is then manufactured and finally, after going through inspection, the product finds a place in the aircraft. The pilot who flies the aircraft is the last man in the chain. Error on the part of any one of the hundreds of people who are involved in this chain and in providing the support services, could have contributed towards the accident. The creation of a proper environment, both physical and mental, so that each individual can give off his best is our moral responsibility.

Flying produces tremendous stresses on man, not all the time, but certainly when his judgement and actions are called upon to handle critical phases of flight or in the face of an emergency. His physical and mental make-up determine the level of his skill and excellence of performance. A scientific approach towards determining these physiological

and psychological norms and dissemination of this information is one of the tasks of those who specialise in aviation medicine. I am happy to note that the Aero Medical Society of India has amongst its members and fellows many eminent scientists and doctors both civil and military, who have made lasting contributions towards the work of the Society through their knowledge, experience and research.

As aircrafts get more and more sophisticated and the speeds at which they operate place a heavy premium on even quicker reaction from the pilot, we might soon reach the threshold of mental and physical stress. The Aero Medical Society is the right organisation to look into these aspects and come up with viable solutions. The effect of continued exposure to high stress on the performance level of the pilot needs to be looked into. I am glad that research into the effects of vibration on performance and efficiency, especially in high speed low flying in the tropics, is being undertaken on high priority.

Aviation is an expensive business, military aviation more so. We cannot afford to have avoidable accidents. An accident is considered avoidable when design, fabrication or maintenance has been inadequate or when the pilot has not been able to cope with the emergency. The process of making the machine more reliable is a continuous one. But where the pilot is concerned we must be absolutely sure that the emergency was of a nature and degree of magnitude which were well within his capability to cope with at that time. Human behaviour can vary so much in a rapidly changing environment. We must be sure that we are not asking for super human skills and application under the prevailing

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circumstances. This could very well be an area of research for your Society.

Since its formation 26 years ago, the Society has expanded its span of activity and has been rendering valuable service to the Air Force and to Civil Aviation. Your continuous dialogue with experts in this field, in our own and in other countries has benefitted us tremendously. Sharing knowledge is good for every body; we probably will stand to receive more than we give.

In the Air Force the flying stations are the hub of flying activity. This is where the young pilots have to master the man-machine complex in accomplishing their flying tasks. This is where they have to face the various problems which, in some way or the other, make flying safe and effective, or hazardous and pointless. This is where then that we must concentrate our attention.

In their own sphere of specialisation, the doctors at our flying stations must apply their mind all the time to identify the weak areas and suggest remedial action. The level of their rapport with the aircrew, the technicians who maintain the aircraft, and all others who man the support services will determine the degree of success that they or rather we can hope to achieve.

Perhaps the Society may consider active participation by their members in the day to day activities in some of our flying stations. First hand knowledge is invaluable and your ideas and suggestions would be greatly appreciated. In the Air Force, there is an active programme of safety education and various measures have been introduced to produce a safe environment for flying, maintenance and operation of services. Your assessment of their effectiveness would also be welcome.

I welcome Dr. Ramanna, one of our eminent scientists, who has consented to deliver the Air Marshal Subroto Mukerjee Oration. I am sure the Aero Medical Society will be that much richer in being able to draw on his deep knowledge.

In these two days of deliberations you will be discussing various medical problems which have a bearing on aviation safety. I wish you every success. I am happy to see a large number of service and civilian medical consultants with us this morning. Your continuing interest in the work of the Society is a source of pride and strength to us.

I now have much pleasure in inaugurating the 21st Annual Meeting of the Society.