

The Government's indecision over the fate of the Avro Arrow, if it has served no other useful purpose, has at least precipitated a great debate over the wisdom and suitability of Canada's entire defence "program". It has highlighted the fact that only lip service has been paid to overall tri-service planning, that the roles to be played by the three services are vague and overlapping, that co-ordination between the services is totally lacking.

In short, it is difficult to describe the state of Canada's defence program without resorting to the use of four-letter words.

Danger of Decline: The Air Force, which admittedly has done well in recent years, is now in serious danger of deteriorating into a second rate force. If the Arrow is cancelled, there is no doubt that the future for the RCAF will be very fuzzy indeed. Its role of air defence is comparatively clear cut, but to suggest that it can carry out this role with interceptor missiles alone is palpable nonsense.

The Army is the Cinderella of the military forces. Nobody seems quite sure any longer what its function is and this is reflected in its inability to get any equipment. The Army says it must be "air transportable" . . . the Government buys a Caribou for the Army to play with; the Army says it must get into the missile business . . . the Government buys a battery of Lacrosse missiles. The Army constantly plays around with aviation, but it never goes beyond that, presumably because the Air Force wants to keep the Army out of the airplane operation business to as great an extent as possible. This might be a tolerable situation if the Air Force could in fact meet all of the Army's airlift requirements, but this it cannot do because the existing demands on RCAF air transport are already excessive.

The Navy is deeply into aviation because it says that to fulfil its anti-submarine role it must have both air and sea units. The implication is that the two are complementary and certainly naval anti-submarine tactics seem to be built around this idea. Yet the ratio of surface to air units is so far out of proportion that it appears impossible for the Navy to create the balanced team of aircraft and ships which it claims is essential.

Cause for Wonder: In spite of this imbalance, the Government has recently ordered six new destroyer escort vessels for delivery to the RCN in 1962-63 . . . at a cost of "approximately" \$26,000,000 per unit. One cannot help wondering, in the age of the deep-diving high-speed nuclear submarine, how effective these surface units will be. Without complementing air units to extend their detection range, and without vastly improved detection gear (for air as well as surface units), these new vessels will find the nuclear submarine an elusive quarry indeed. To bring Canada's anti-submarine Navy back into combat balance again, it would appear that what it needs are not additional vessels of the destroyer escort type, but another carrier and more aircraft.

These are but a few of the criticisms that can be made of the administration of Canada's defence forces, both individually and collectively. They point to a clear need, in our opinion, for the establishment of a study group to undertake at this time a survey of the entire Canadian defence program with the aim of improving interservice co-operation, trimming overlapping of functions and sharply defining the role that each service will play in the next decade.

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It is encouraging to see that in spite of the current unsettled state of Canada's Aircraft Industry, insofar as production contracts are concerned, that at least aeronautical research and development is apparently to be maintained at a reasonable level. Research and development, even more than production, is extremely sensitive to stop and start programs. If firm foundations are to be laid for the aeronautical future, it is extremely important for the research effort to be a continuous one. Thus, the news from Ottawa that the Government will go ahead with the construction of the NAE's supersonic wind tunnel at Uplands is important to Canada's Aircraft Industry. Similarly, it is heartening to learn of the recent expansion of facilities at the University of Toronto's Institute of Aerophysics. Of particular interest is the news that the Institute has put into operation a development model of a new Mach 24 plasma tunnel for the purpose of studying conditions expected to be faced by missiles and satellite vehicles travelling in space. These developments, though not of immediate significance, will help to assure Canada a continuing place in the aeronautical field, and also to enable her to make a significant contribution in the space age.