

United Automobile Worker, for example, runs a school for rank and file members through which the union is interested in producing more than union leaders. It's citizenship, the members will tell you — the rights and responsibilities of being a citizen. They want to produce future mayors, future Members of Parliament, and the approach and results are not unlike those of the forces: to teach people how the system works and to build confidence."

The theory behind the Armed Forces leadership manual, upon which the one-year course at Kingston is broadly based, is that we are motivated by an ascending scale of needs. These are listed as physical needs, safety needs, self-esteem needs and self-fulfilment needs. As each need is satisfied, it can no longer motivate. You don't encourage a man with a full stomach by offering him another dinner. The satisfaction of physical and safety needs will not make a man happy: it will only keep him from being unhappy. Only motivation through the needs of self-esteem and self-fulfilment will produce happiness.

Confident corporals

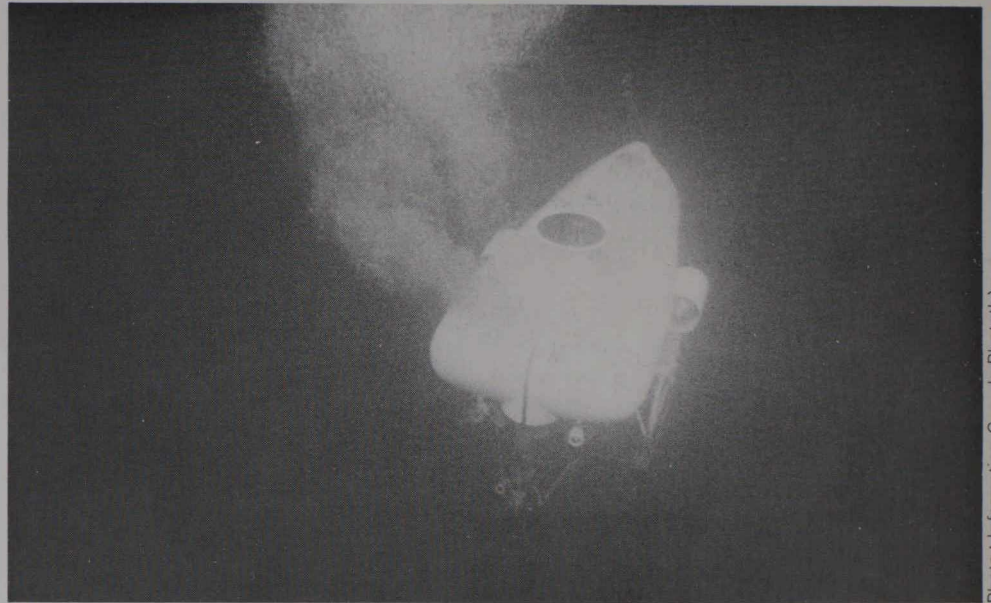
In today's Armed Forces authoritarianism has become a thing of the past: the new leadership training manual is now acknowledged as one of the best textbooks on the subject of leadership in the country.

General J. A. Dextraze, chief of the defence staff, explains "Under our leadership programme all ranks from corporal to general are exposed to the same fundamentals of leadership. Even corporals take 15 hours of lectures on behavioural psychology, motivational theory, communications theory, personnel counselling, etc. Confidence is built by making them stand up and speak for themselves."

The National Defence College has for some years been running a top course for people marked for senior rank and it is this course that has attracted the young business executives — indeed, the proportion of non-military to military candidates has now risen to 50 per cent. General Edwards, the commandant, says the 47-week course is a "look inside Canada at all aspects of life — the totality of Canada, if you will — and a look from the outside in." Those attending the course make extensive field trips to South America, Europe and the Arctic. It is free, including all transportation abroad, since that is done in Armed Forces aircraft. Of the civilians attending the course, many are government officials from Canada and abroad, academics and representatives of foreign governments, as well as young business executives.

One businessman who took the course 10 years ago is Harry Pilkington, now vice-president, personnel, of Bell Canada. He is full of praise for it. At first, he recalls, he wondered whether any of the material had any relationship to business; but afterwards "you realise what a superb all-round education it is."

Submarines extend underwater research



Submersible 'Pisces' III by HYCO of Vancouver.

During the war they were known as "midget submarines" and their function was to infiltrate enemy harbours and sink ships. Today these tiny underwater craft have been developed for research purposes and big advances have been made over the past eight years by two Canadian firms, International Hydrodynamics of Vancouver (known as HYCO) and Arctic Marine.

The latest models pioneered in their workshops, the Pisces and Sea Otter, resemble large mechanical fish. One fifth of the size of the smallest whale, these craft are capable of manoeuvring and performing complex tasks as deep as 6,200 feet below the surface.

To emphasise the peaceful and scientific uses for which they are designed, the term "submarine" has been dropped and they are now known as "submersibles." Since 1968, Pisces submersibles have been used for exploration and study of the sea bed under Arctic ice. They are used for tasks as varied as laying and inspecting submarine cables, mineral and oil prospecting, salvage operations and the study of problems caused by pollution of the oceans. Their work is done with the aid of manipulators, corers and other detachable equipment mounted on the hull. The submersible's interior is more like that of a space capsule than a conventional submarine.

The new generation of manned submersibles in fact perform the same kind of tasks as frogmen, but at much greater depths and with increased power and versatility. The most recent models have a lock-out compartment for divers which

they can also use as a work platform. The smallest model measures slightly over 13 feet in length and weighs three and a half tons. It is propelled by an electric motor which permits dives of five to 12 hours duration. In addition to its ballast, this submersible can carry a maximum crew of three and a 200-pound payload.



Engine room like the interior of a space capsule.

Photo: Information Canada Photothèque

Photo: Information Canada Photothèque