

GENERAL SCIENCE

G.I. Scientists Surveyed

Recommendation that some national agency be empowered to allocate and assign scientists to jobs they are best suited for in event of war was made.

➤ IF THE scientists who served in uniform in the last war had their way, the present selective service system would not be used to utilize scientists in the armed forces in another emergency.

Only two out of nearly 5,000 scientist-soldiers who joined in a two-year study made for the General Staff of the Army would use selective service as is to recruit scientific manpower. Over half strongly recommended some national agency to allocate and assign the scientists to jobs they could best do in war, whether in uniform or civies.

The Army survey, directed by Dr. David M. DeLo, under the title **SCIENTISTS IN UNIFORM** was aided by 31 scientific societies, many of which sent questionnaires to their members.

The complaints registered by the soldier-scientists are not merely normal G.I. gripes. Suggestions are made for the future.

An undesirable onus was placed upon scientists deferred for important research work, the report says, although civilian scientists were better utilized in the war than the uniformed scientists. Steps should be taken to keep young scientists from rushing into the armed services as volunteers pressured by public opinion and draft uncertainties. This would "probably be to the detriment of the over-all war effort."

Top physical fitness should not be required for professional scientists on technical jobs, the survey found. Age should not be a barrier to many non-combat services.

Make every working scientist responsible for service in the national interest no matter what his age or physical constitution, the experts recommend. Don't allocate them again in an emergency by lot, age group, or local bulk quotas.

Unrealistic draft policies in World War II as well as the present demand for trained scientists are blamed for severe shortages of men in some scientific fields today.

To plan realistically for either future war or future peace, the study concludes, a national agency to evaluate present and potential supply of scientists is needed. This catalog or roster should be operated through the agency of scientific and engineering societies.

The armed services had no adequate mechanism for effective utilization of professional engineers and scientists who remained in the ranks as enlisted men, the survey showed. Many scientists served in non-technical assignments in military service, although at the same time other or-

ganizations were crying for technical assistance and personnel.

A scientist or engineer who was drafted or voluntarily enlisted had only two chances in ten of utilizing his technical background at his level of competence, a reserve officer three in ten chances, and those directly commissioned from civil life four in ten chances.

Science and technology were not applied as effectively as they could have been to the prosecution of the war, the survey concludes, on the basis of what happened to the scientists in uniform.

Maj. Gen. A. C. McAuliffe, Deputy Director of the Army's Research and Development, declared in the report:

"Science and scientists are vitally important to modern military functions. Success in any future war will depend as much on the effective use of all the scientific resources of the Nation as upon efficient industrial mobilization or skillful command of the fighting forces.

"Scientists constitute an exceedingly small segment of the national population. They

compose less than 2 percent of the Armed Forces, but the military functions dependent on their specialized skills and knowledge are highly disproportionate to their numbers. The small numbers involved and the great complexity of scientists' experience and training require the use of special measures to assure their maximum utilization."

What the scientists of the nation must do in any future war is told in the report in six points:

1. The Military Services must be supplied with an adequate number of professional scientists and engineers, both civilian and uniformed, to perform their technical missions.

2. Adequate numbers of physicians and supporting personnel such as radiologists, bacteriologists, and sanitary engineers, must be reserved in civilian status to maintain the national health.

3. A sufficient number of civilian engineers and scientists must be assigned to operate communication and transportation systems, and light-and-heat facilities.

4. Industry must utilize scientific manpower to carry on research, development, testing, and production to support the war effort and the civilian economy.

5. Various nonmilitary governmental agencies must continue their scientific activities.

6. Educational activities must be continued on a reduced but significant scale so that we do not sacrifice the long-range welfare of the country to short-range needs.

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AERONAUTICS

Russia's New Jet Planes

➤ THE Soviet Air Force is concentrating on fast interceptor jets and four-engined jet bombers, **ORDNANCE** (Jan.-Feb.), official journal of the American Ordnance Association, states. Sufficient information has leaked from behind the Iron Curtain to permit experts to appraise the Soviet air arm.

Russia's use of its air arm in another war would be far different from the applications in the past war. In it, the air force was an arm of the land force and was employed with heavy-caliber machine guns to play hob with German supply lines, troop concentrations, and fighter landing fields behind the lines. The speedy fighters and long-range heavy bombers now under construction and in use indicate Soviet preparation to be able to carry destruction to an enemy's home country.

The available information from Russia shows that the Reds have gone all out for jet propulsion, just as have the British and Americans. New planes have a distinct German flavor in their design. This is to be expected because the Russians took all the Nazi aircraft factories and engineers they could find in the closing days of the war and moved them into Russia proper. In-

cluded also were many plans for projected jet- and rocket-powered military aircraft.

The Yak jet-fighter is one of the most interesting aircraft of the type produced in postwar Russia. It resembles the American Air Force Republic Thunderjet F-84 very closely. It is claimed to be in the 650-mile-an-hour class. It is supposedly powered with the British Nene jet engine, a Rolls-Royce product. An American version of this same engine, constructed by Pratt and Whitney, will be in use soon in Navy, Grumman-Panther, carrier-based, jet fighters.

The Soviet Ilyushin four-jet bomber resembles the American Boeing B-47. Its engines are underslung on struts below its thin wings. It has a B-17-type tail turret and it carries its main landing gear in the fuselage, thus simplifying the thin-wing design.

Of special interest to Americans is the Soviet version of the famous B-29 Superfortress, four of which came into Russian hands during the war. It is the Soviet TU-70. In conformation, it looks like the B-29, and many of its component parts are obviously exact duplicates.

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