

GENERAL SCIENCE

Great Need for Scientists

Evidence at the Geneva conference shows that many scientists who go to more advanced countries to study deprive their own countries by not returning to their homelands.

► THE WHOLE EMPHASIS of trying to raise the level of living, industry and culture in the less developed nation is upon providing scientists and technologists.

Yet evidence laid before the UN Science Conference in Geneva is that, when a less advanced nation has trained an expert, he is likely to desert his homeland.

A study prepared for this world meeting shows that scientists and engineers migrating from other countries added 3.2% to those produced by U.S. universities in the period 1949-1961. While 70% of the 43,500 imported came from Europe, 20% of the added "brains" originated in Latin America and Asia, the very areas in which the U.S.A. is making extensive efforts to bolster science and technology.

When scientists who get a taste of life in more advanced countries by going to

college there desert their own countries, it is a national catastrophe, Dr. Charles V. Kidd of the National Institutes of Health, Bethesda, Md., reported. There has been lost the nucleus of those who alone can build a science civilization.

The homelands of the scientists who are tempted to leave can appeal to patriotism, develop science as a national policy, offer the higher level of education at home and provide good opportunities at home for those who go abroad for higher education so they are more likely to come back.

Since science transcends national boundaries and a great discovery, wherever made, serves the whole world, some movement of scientists from one country to another is inevitable and even beneficial.

• Science News Letter, 83:100 February 16, 1963

GENERAL SCIENCE

Talented Chinese Youth

► OVER 1,500 talented students from Peiping's 99 high schools regularly attend the study groups organized by the local scientific and technological association to help develop a young generation of scientists.

Reports reaching the United States say that most of the students are from graduating classes and have done well in their studies and shown special interest in science. They will enter institutions of higher learning after one more year at school.

The four groups, in chemistry, mathematics, physics and radio, were formed in 1961. They are entirely free of cost to the students. Each meets once or twice a month after regular school hours or on holidays.

In order to stimulate the students' thinking and broaden their general scientific knowledge, lectures deal with topics not included in school textbooks, like atomic energy, semiconductors, electronics, radioactive isotopes and radio-communications. They are illustrated with lantern slides, experiments and models.

Internationally known mathematician Hua Lo-Keng, physicist Yen Chi-tzu and other scientists worked out programs of lectures with the high school teachers. Professors and lecturers from Peiping University and the University of Science and Technology have volunteered to help.

A total of 300 high school teachers of mathematics, chemistry and physics also attend the lectures so that they can give their own students extra help.

Already some of the outstanding members of these study groups have found their life's interest in one of these subjects and are studying the related specialties offered by

the institutes of higher learning. Last autumn, more than one-third of the new Peiping students enrolled in the chemistry department of Peiping University were members of the chemistry group.

In addition to these groups, boys and girls between the ages of 9 and 15 from 90% of the capital's primary and middle schools participate in numerous extracurricular activities organized by the children's clubs and centers of science and technology in every district.

They can take up whatever hobby they fancy. Most popular among high school students are the building of radios and model airplanes, meteorology, botany and electrical work. Younger children concentrate mainly on animal raising, cultivating vegetables and handicrafts.

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TECHNOLOGY

Chinese Communists Plan Plastic for Farm Tools

► THE CHINESE Communists are suffering from a shortage of wood and metals and are considering making farming tools from plastic, reports a Hong Kong businessman just returned from Canton. The Reds had raised objections to this plan because the main source of supply would be Hong Kong, making the tools expensive.

A shortage of farming tools was one of the factors affecting crop production and a number of Chinese Mainland newspapers have been pushing the use of plastic.

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Questions

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ASTRONOMY—What is the surface temperature of the three giant stars newly discovered in the Milky Way? p. 98.

GENERAL SCIENCE—How soon do the Russians predict the natural resources of neighboring planets will be available to mankind? p. 99.

MEDICINE—What hormone-like substance may cause birth defects? p. 111.

SPACE—Why is it important that an astronaut not be imaginative? p. 101.

TECHNOLOGY—How does armor plate "eat" lead? p. 110.

SCIENCE NEWS LETTER

VOL. 83 FEBRUARY 16, 1963 NO. 7

Edited by WATSON DAVIS

The Weekly Summary of Current Science, published every Saturday by SCIENCE SERVICE, Inc., 1719 N St., N.W., Washington 6, D. C., NOOrth 7-2255. Cable Address: SCIENSERVC.

Subscription rates: 1 yr., \$5.50; 2 yrs., \$10.00; 3 yrs., \$14.50; ten or more copies in one package to one address, 7½ cents per copy per week; single copy, 15 cents, more than six months old, 25 cents. No charge for foreign postage. Change of address: Three weeks notice is required. Please state exactly how magazine is addressed. Include postal zone number.

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Printed in U.S.A. Second class postage paid at Washington, D. C. Established in mimeograph form March 13, 1922. Title registered as trademark, U.S. and Canadian Patent Offices. Indexed in Reader's Guide to Periodical Literature, Abridged Guide, and the Engineering Index. Member of Audit Bureau of Circulation.



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