

PSYCHOLOGY

Viet Nam Police Tested

► THE NOISY rumpus that occurred when policemen in Viet Nam were introduced to an American-type intelligence test is reported in *American Psychologist* (Feb.) by Dr. Frederic R. Wickert, Michigan State University psychologist of East Lansing, Mich.

Dr. Wickert was one of a group from his university sent to Viet Nam to give technical aid to the government. His particular team was charged with helping to improve the internal security. In that connection, it was decided to start a police academy.

The need for a test arose in connection with selecting the best prospects for special police training at the academy. After consultation with Vietnamese officials it was decided to make a test partly of Vietnamese language items and partly arithmetic at the sixth-grade level.

Teachers were borrowed to help construct the test and school boys were borrowed to try the test for difficulty.

First difficulty was posed by the Vietnamese language. The whole language is in monosyllables with the more complex ideas expressed by stringing monosyllables together. It is basically a peasant's language, Dr. Wickert explains, and poor in abstractions. To express abstract ideas it is necessary to borrow heavily from Chinese. Men who would make good policemen could not be expected to do well on such Chinese-type words.

In addition, different dialects are used in North and in South Viet Nam. The

teachers who constructed the test were from the North, but the men who would take the test would understand only the dialect of the South.

Worst difficulty for administering a group test was the Vietnamese habit of "thinking out loud" while working problems and their custom of talking freely to each other while taking an examination.

When the big day arrived and 130 policemen turned up to take the test for admission to the new academy, it was necessary to split them into two groups. The first group was started with much supplementary instruction on not talking to each other. They seemed to understand and started to work quietly on the test. The examiners then went to the next room to start Group II.

"They had scarcely started," Dr. Wickert reports, "when the slight rumble from the direction of Group I increased to a roar.

"We rushed back only to find that they had gone back to thinking out loud, each one trying to shout his neighbor."

Nevertheless, the test was a success and it was decided to return to routine duty the 26 men who received the lowest scores.

This decision raised a new problem. A number of persons, including both Vietnamese and Americans, objected to sending these men back. It was felt that they were the ones who most needed special training. Finally, it was worked out that the low men from four or five classes would be given special instruction fitted to them.

Science News Letter, February 23, 1957

PHYSICS

First Atomic Profits

► THE FIRST profits from the sale of the atom by American industry will come from abroad, Michael Michaelis of Arthur D. Little, Inc., Cambridge, Mass., told members of the American Management Association meeting in New York.

Foreign markets are the logical place for American industrialists to look for early profits from the sale of nuclear equipment and know-how, Mr. Michaelis told a special conference called, "Managing the Atom."

This is because atomic power will be used in competition with fossil fuels abroad sooner than it will in the United States. In this country, he pointed out, power is still plentiful and cheap when compared to atomic power at its present stage of development. The same is not true for many countries in the world, where fuel and power are both scarcer and more expensive than in the United States.

The commercial use of atomics, first abroad and then in the United States, Mr. Michaelis said, represents a tremendous market for nuclear equipment for U. S. firms.

The experience gained with foreign reactors and nuclear power, he pointed out, will speed the use of atomic energy for commercial purposes in this country.

Although there are many obstacles and problems to be worked out in the international commerce of the atom, Mr. Michaelis said, profits from exports of American nuclear equipment should tide over industry during the comparatively lean years anticipated in the home market for atoms.

Science News Letter, February 23, 1957

TECHNOLOGY

Super Magnet Made Of Iron Dust Developed

► A SUPER MAGNET made up of billions of tiny iron particles has been developed by General Electric scientists in Lynn, Mass.

The magnet, a result of molding invisible iron dust by powder metallurgy techniques, promises smaller, lighter and more rugged electrical instruments. It will also find an

important place in the nation's atomic energy program.

Ordinary iron is used as elongated, sub-microscopic particles. So fine is the iron dust, that there are more than a billion billion particles in one pound.

An important feature of the super magnet is that cobalt is not required in its manufacture. Cobalt is found in most all super magnets used in the past. The cobaltless magnet means that it can be utilized in nuclear reactors.

The development of T. O. Paine of the G. E. instrument division, the magnet is expected to find wide use in photo exposure meters and wherever permanent magnets are needed.

Science News Letter, February 23, 1957

MILITARY SCIENCE

Aircraft Company Rifle As Basic Weapon

► A SEVEN-POUND rifle that throws out lead at the rate of 750 shots per minute may become a basic U. S. infantry weapon.

The new weapon is called Armalite by its developer, Fairchild Engine and Airplane Corporation, and is the first such rifle to be produced by American industry in more than a decade.

Currently undergoing exhaustive tests by Army engineers, the lightweight, fast-firing rifle shows promise of replacing four weapons at once: the Browning Automatic Rifle (BAR), currently a backbone of the infantry squad arsenal; the carbine; the sub-machine gun; and the .45 caliber pistol.

In addition, it is the sole U. S. industry contender in the NATO arms race to find a light, rapid-fire weapon.

The new rifle emphasizes strictly the functional approach, light weight and mechanical and manufacturing simplicity "as might be expected of an aircraft industry's design," says Col. Melvin M. Johnson, Jr., an automatic weapons inventor and arms expert who test fired the Armalite.

Col. Johnson describes the new weapon, which can be fired single-shot or full automatic and from the shoulder or on a bipod, in *Army* (Feb.), the official publication of the Association of the U. S. Army.

Tabbed AR-10, Armalite is 40 inches long and together with its recoil compensator, weighs seven pounds. It takes rounds from an aluminum magazine that holds 20 short .30 caliber bullets. On full automatic, the 20-round clip can be emptied in 1.65 seconds.

Gas-operated, AR-10 is so designed that when it is loaded and locked the action is entirely closed against sand, dust, mud, rain and snow, Col. Johnson reports. He also says that the weapon can be disassembled easily.

As a modern rifle for a conventional type of small arms ammunition, Col. Johnson concludes, the Fairchild Armalite shows many interesting possibilities for hyper-mobile U. S. Army and other NATO military needs.

Science News Letter, February 23, 1957