

CARDIOLOGY

Devise New Heart Test

► THE OLDER and fatter a man is, the greater the likelihood he will register an abnormal response on a laboratory test that may help find heart disease unnoticed because there are no symptoms.

The test, which combines ballistocardiogram and the Dock cigarette smoking test, measures the effect of the smoking on the heart's pumping action. It was used on 2,736 airmen at the Smoky Hill Air Force Base, Salina, Kans., by Capt. Murray Strober of the U.S.A.F.R. Medical Corps, who reports his findings in the *Journal of the American Medical Association* (July 14).

Capt. Strober states that his study confirms the connection between smoking and abnormal ballistocardiographic results. He reports there is no clear explanation for this, but there is a definite relation between ballistocardiograph abnormalities and coronary disease.

The vast majority of airmen tested had normal tracings on the ballistocardiogram. Abnormal tracings increased 30 times in

persons between 30 and 60 years of age. Abnormal responses showed up, Capt. Strober points out, in overweight individuals both before and after smoking, regardless of age. Not one ballistocardiogram showed any improvement after smoking.

Part of the reason for the Air Force study, which is scheduled for a long-term follow-up, was to see if the test could detect coronary disease without symptoms in persons engaged in the hazardous duties of flying at enormous speeds in high altitudes.

It is unlikely the test will detect all cases of asymptomatic heart disease, the Air Force doctor states, but it may find cases not found by other means. In addition, as an adjunct to a careful physical examination and heart study, the test is rapid, efficient and economical.

Dr. Strober is now at the State University of New York College of Medicine, Brooklyn, N. Y.

Science News Letter, July 28, 1956

PSYCHOLOGY

Reveal Personality Traits

► THE EMOTION you see expressed in a photograph of a stranger's face will reveal many of your own basic personality traits, two Colorado psychologists state.

A series of 30 portraits, each having a different facial expression, has been successfully used as a personality test by Drs. Donald D. Glad of the University of Colorado Medical Center and Charles R. Shearn of Denver General Hospital.

The two psychologists call their device an Emotional Projection Test. It is based on the theory that people tend to read their own feelings and emotions into another person's expression if they are unable to learn what situation prompted the expression.

Two college students majoring in theatrical work posed for the photographs. They were asked to act out scenes from Shakespeare's plays. Movies were taken of their performances and 30 prints were made from the exposed film.

The psychologists did not attempt to discover what emotions the actors were really trying to portray in each picture, considering this irrelevant.

Earlier experiments showed people seldom agree on what emotion a person is expressing if the situation that caused the expression is not apparent.

Persons taking the test are provided with short lists of possible emotions to accompany each picture. The subject is asked to check the emotion he thinks best fits a given photograph. This multiple choice type of examination, the psychologists say, is easy to standardize.

The test's advantages, its developers claim, include the ease with which it can be given, the high interest it holds for persons tested, the fact it can be given to large groups by projecting pictures on a screen, and the fact that, unlike other projective tests, it is limited to the emotional aspects of personality. A full description of the test is reported in *Perceptual and Motor Skills* (Monograph Supplement One).

Science News Letter, July 28, 1956

Between 1955 and 1960, the U.S.S.R. proposes to increase *production* of meat by 100%, of milk by 95%, of eggs by 154% and of wool by 82%.

Questions

AERONAUTICS—What is "flap-blowing?" p. 59.

BIOPHYSICS—At what age are the brains of baby rats most sensitive to radiation damage? p. 53.

GEOPHYSICS—What is Project Vanguard? p. 54.

MEDICINE—How does tuberculosis affect pregnancy? p. 55.

METEOROLOGY—What is a hurricane? p. 54.

SOCIOLOGY—How many types of union members have two sociologists found? p. 50.

PHOTOGRAPHS—Cover, Department of Defense; p. 51, Bell Telephone Laboratories; pp. 53 and 55, General Electric Research Laboratory; p. 64, Shelly Smith Studios.

AGRICULTURE

Weed-Caused Damage Measured in Inches

► THE DAMAGE weeds do to plants has been measured by scientists in Iowa.

Testing the effects of weeds on soybean plants, Drs. David W. Staniforth of the Iowa Agricultural Experiment Station and Charles R. Weber of the U. S. Department of Agriculture found weeds decrease plant height about two inches and delay maturity about one day.

The scientists found in dry years weeds have little effect on soybean yields, while in wet years yields were most reduced late in the season. On the average, the weeds began to retard soybean yield early and the effect kept increasing until the season's end.

The weeds used by the scientists included yellow foxtail, velvet leaf and Pennsylvania smartweed. After being planted singly and in combination in the row with soybeans, the weeds were thinned to stands of three, six and 12 per foot of row.

Science News Letter, July 28, 1956



Wrist Radio Weighs 2.5 oz.

All-transistor wrist radio receiver

A broadcast band all-transistor wrist radio has been designed with r-f reflex circuit to provide good selectivity and sensitivity. Three transistors are used which require 4.5 ma total battery current and five button-size mercury cells last up to 100 hours. The receiver features a 2-stage transformer-coupled audio amplifier and a no-whistle regenerative circuit. A high quality hearing aid receiver allows for private listening. Printed circuitry is used throughout. Band coverage

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is 550 to 1600 kc. Its small size (2¾ in. long, 1¾ in. wide and ¾ in. thick) and weight (2.5 oz. with batteries) make it well suited for wearing on the wrist or in a shirt pocket. Completely assembled with all batteries.

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