

## PSYCHOLOGY

**Testing Children  
For Their Attitudes**

► PSYCHOLOGISTS OFTEN give a child tests other than intelligence tests to learn why he is not doing well at school or is a problem child at home.

From these other tests, clues are gained concerning how the child feels, how he sees the world around him and how he reacts to it. One of these tests is the Rorschach Ink-Blot Test, as it is generally known. Miss Lillian Mould explains this and some other attitude tests in *Understanding the Child* (Jan.).

The Rorschach test, she says, "is deceptively simple, consisting of ten ink blots, five of black ink, and five of colored ink. Through classifying the kinds of responses, a picture of the personality is gained. Study of the responses reveals frequently the area around which emotional problems center, and also how deep-rooted these are."

"In addition to the Rorschach, another test is used frequently which reveals specific attitudes towards key people in the child's life. This is called the Thematic Apperception Test, "T-A-T," and is a series of pictures of various scenes, about each of which the child is asked to make up a story. These pictures elicit expression of attitudes to members of the family, to authority, to people of the same sex and of the opposite sex. Through these stories, strivings and goals are also revealed. They are especially helpful with adolescents.

"For younger children the Children's Apperception Test, "C-A-T," has been developed, using animals instead of human figures for the subjects of the pictures, as children generally identify more readily with animals."

Science News Letter, March 7, 1953

## MEDICINE

**Jaundice Cutting Blood  
Supply by Two Percent**

► THE NATION'S supply of blood donated to the Red Cross for the armed forces and for gamma globulin for polio and measles prevention would be richer by at least two percent except for jaundice.

The loss runs to about 2,000 pints of blood a week, maybe more.

The figures come from a report by Drs. Paul P. McBride and George W. Hervey of the American National Red Cross in Washington to the *Journal of the American Medical Association* (Feb. 28).

In order to minimize the spread of viral hepatitis, liver ailment usually marked by jaundice, the Red Cross asks prospective blood donors whether they have ever had jaundice and whether they have had contact with it in the past six months. Blood is not taken from prospective donors if they answer yes to either question.

Figures covering a two-week period from Red Cross blood and processing centers in 59 regions distributed from coast to coast

showed that 1.94% of all prospective donors were eliminated because of a history of jaundice or jaundice contact.

Many more may have eliminated themselves from learning that a history of jaundice would be a barrier to acceptance as blood donors.

Some may have been eliminated because they once had jaundice due to gallbladder trouble, which would not mean that their blood carried the hepatitis virus.

The approximately two percent eliminated at donor stations represents, the doctors point out, "an important additional supply of blood fractions if proper precautions are taken to avoid risks to staffs handling the blood and to the ultimate recipients of the fractions."

Tests have shown that the albumin and globulin fractions of blood, which are the ones most used at present, do not transmit the hepatitis virus.

Science News Letter, March 7, 1953

## SURGERY

**Surgery Treats Two  
Adrenal Gland Diseases**

► GOOD RESULTS in surgical treatment of two kinds of adrenal gland diseases are reported by Drs. Randall G. Sprague, Walter F. Kvale and James T. Priestley of the Mayo Clinic, Rochester, Minn., in the *Journal of the American Medical Association* (Feb. 21).

One of these diseases, called pheochromocytoma, is a condition in which there is an overfunctioning tumor of the inner part of an adrenal gland. These tumors cause sustained high blood pressure.

The other disease is called Cushing's syndrome. High blood pressure also occurs in this condition. Patients, who are almost always women, have very fat faces, necks and trunks with thin arms and legs, porous bones and weak muscles. Sex gland disturbance or failure, acne, hairiness and thin skins are other symptoms.

In pheochromocytoma the operation consists in removing the tumor. In Cushing's syndrome, the Mayo Clinic surgeons remove all of one and most of the other adrenal gland. Their reason for this is that the symptoms are the immediate consequence of overfunctioning of the glands, so, regardless of what causes the overfunctioning, removal of much of the tissue should relieve the symptoms.

Results of the operation show that this reasoning is correct. Since 1945 the operation has been performed on 50 patients. Of these 41 are now alive, 40 of them in a state of satisfactory freedom from symptoms.

Pheochromocytomas have been removed from 25 patients with "gratifying" results in "virtually all cases," the doctors report.

Cortisone, famous hormone produced by the adrenal gland, and modern methods of preparing patients for operation and caring for them immediately afterwards are credited for the good results in the operation which once would have been fatal.

Science News Letter, March 7, 1953

**IN SCIENCE**

## PSYCHOLOGY

**Quicker Talking  
Found Intelligible**

► RECORDED MESSAGES like the telephone weather prediction could be speeded up in transmission as much as two and one-half times the original speech without much loss in clarity.

Success with a new method for chopping and splicing a recording tape so as to cut down on transmission time is reported by Dr. William David Garvey of the Naval Research Laboratory in the *Journal of Experimental Psychology* (Feb.).

Other methods of accelerating speech have been tried previously. One was to have the speaker talk faster, but when a person tries to speed up his speech he does not pronounce his words so clearly and the meaning is lost.

Another method was to run the tape or the record faster, but as anyone knows who has tried to speed up the old-fashioned phonograph, this makes the pitch higher and a bass voice comes out as a squeaky soprano. Acceleration by this method was possible only up to 1.67 times the original speech speed. Beyond that it was better to chop chunks out.

Pieces of the tape as long as 2.5 centimeters could be chopped out without significantly affecting intelligibility, it was found. More than half the speech pattern can be chopped out without loss of meaning.

No immediate military use for the chop-splice accelerating method was mentioned by Dr. Garvey in his report. It is possible, however, that it may find application in broadcasts of recorded information for guiding aircraft.

Science News Letter, March 7, 1953

## PSYCHOLOGY

**Anxious? Heart Slows  
Down, Not Speeds Up**

► ANXIETY CAUSES a slow-down rather than a speed-up of the human heart rate. This finding, contrary to popular opinion, was announced by Drs. William N. Schoenfeld, Joseph M. Notterman and Philip J. Bersh of Columbia University psychology department, New York.

The finding was made with a specially devised conditioned reflex test of 250 male students at Columbia. The research was done with support by the Air Force's School of Aviation Medicine, Randolph Field, Tex. The Air Force interest is said to come from concern that highly trained jet pilots could become physiologically handicapped, without being aware of it, because of their hearts' reaction to anxiety.

Science News Letter, March 7, 1953

# CE FIELDS

## PLANT PATHOLOGY

### Find Banana Disease Hides Out in Wild Plants

► PANAMA DISEASE, a fungus-caused wilt that threatened to wipe out much of the Central American banana industry a few years back, may defy eradication by "hiding out" in wild plants near banana fields.

B. H. Waite and V. C. Dunlap, working at the United Fruit Company research laboratory in La Lima, Honduras, have discovered three native grasses and a shrub to be reservoirs of the Panama disease fungus, *Fusarium oxysporum*, they disclose in *Plant Disease Reporter* (Feb. 15).

Outbreaks of Panama disease almost ruined banana growing on Caribbean coast plantations some years ago, leading to a migration of the industry to the Pacific side of Panama and Costa Rica.

Vigorous preventive measures have partially restored productivity in the affected areas, but hidden sources of the disease have defied complete control. Finding the wilt associated with native plants may give a clue to final conquest of the disease.

Science News Letter, March 7, 1953

## AERONAUTICS

### Space Suits Outmoded By Pilotless Missiles

► SPACE SUITS, Navy or Air Force version, may soon be as old-fashioned as the top hat became after President Eisenhower placed a homburg on his head.

Experts in high flying are already predicting that a human being is too slow in his reflexes, too vulnerable to damage even in a space suit to go along for the ride way above the wild blue yonder the Air Force has been singing about. Space flight will be taken over by electronic brains and telemetering devices in guided missiles, while the "pilot" sits comfortably on the ground. What he wears on the ground will have nothing to do with the performance of these pilotless space ships.

Students of "space medicine," a new branch of medicine being investigated by the Air Force at Randolph Field, Tex., have their doubts as to the ability of the frail human being to take it between the earth and the moon. The sense of balance, which keeps us on our two feet, will be seriously affected by the loss of gravity experienced in a space flight.

Little is known about the effects of the cosmic rays that bombard our atmosphere. Many are stopped before they get to the ground by the ionosphere. The few which reach us go right through us, but do us no

harm. What this form of radiation would do to humans above the protecting envelope, whether inside space suits or not, is not yet clearly known.

Even at comparatively low levels, where the combat of the next big war might take place, some engineers think pilots are too slow. Combat above 50,000 or 100,000 feet might well be between guided missile bombers and guided missile fighters. Present space suits protect pilots against some sharp turns, but guided missiles without human beings could turn on a dime, suddenly increase or decrease acceleration to an extent that no practicable space suit could ever protect against.

All these developments are a few years away yet. In the meantime, pilots who fly high and fast will need some sort of protection in the form of space suits. But they are probably only a passing fad.

Science News Letter, March 7, 1953

## MEDICINE

### New Anti-TB Drug Cures Disfigured Skin

► TWO WOMEN who for more than 30 years suffered from a disfiguring tuberculous skin condition that defied other methods of treatment have been apparently cured by the new anti-TV drug, isoniazid. The disease is lupus vulgaris.

Their cases are reported by Drs. Lawrence C. Goldberg and Claudia R. Simon of the University of Cincinnati College of Medicine in the *Journal of the American Medical Association* (Feb. 21).

Whether the skin condition will come back after the drug has been stopped is not known yet. The improvement, called "dramatic" both in clinical results and in microscopic examination of the skin tissue, came within a few months of treatment. The skin still showed the scars of the disease, however.

Science News Letter, March 7, 1953

## ZOOLOGY

### Explorers Plan New Guinea Trek

► THREE EXPLORERS will leave New York for the rain forests of New Guinea this month for a nine-months' expedition collecting animals and plants of this little-known region.

Leader of the expedition is botanist Leonard J. Brass, who has made three previous trips of exploration into the New Guinea area. His assistants will be zoologists Geoffrey M. Tate and Hobart M. Van Deusen.

The expedition is the fourth of a series to study the relationships among the plant and animal life of New Guinea, Malaysia and Australia. It is co-sponsored by Richard Archbold, the American Museum of Natural History, the Arnold Arboretum of Harvard University and the Office of Naval Research.

Science News Letter, March 7, 1953

## CONCHOLOGY

### Beautiful Shells House Deadliest Creatures

► AMONG THE deadliest creatures on earth are a half-dozen species of beautiful seashell animals from the South Pacific and Indian Oceans. These mollusks, akin to the cone-shaped seashells of American beaches, have a poison as virulent as that of a rattlesnake.

The Smithsonian Institution recently added several species of cone shells from Australia and the Marshall Islands, including poisonous varieties, to its collection.

In the past 50 years a score of human deaths have been caused by stings of the poisonous cone shells, the Smithsonian Institution said. The poison acts on the nervous system and death may result in a few hours.

Although all known cone shells have poison, only about six are deadly to man. The American cones have never been known to sting a human.

Science News Letter, March 7, 1953

## MEDICINE

### Eyelid Cancers Yield To Radiation Treatment

► GOOD RESULTS in treating cancer of the eyelids with radium and X-rays are reported by Dr. Bertil Roseberg of the Rockford Memorial Hospital, Rockford, Ill.

The overall healing rate was 85.3%, or 87 out of 102 cases. All were followed for three or more years after the last treatment. Dr. Roseberg believes all recurrences of such cancers come within three years following initial treatment.

His study was made at the State University of Iowa Hospitals, Iowa City, and is reported in the *American Journal of Roentgenology, Radium Therapy and Nuclear Medicine* (Feb.).

Dr. Roseberg pointed out that cancer of the eyelids may cause severe changes in the function of the eye and underlying tissues, and loss of vision in the involved eye and even loss of life may result.

He stressed the importance of preserving the function of the eye and its adjoining tissue while at the same time removing the cancerous lesion completely.

The most common type of cancer of the eyelid may develop either as a small non-ulcerating lump with or without a central depression, or it may begin secondary to a keratosis, a horny growth, which usually ulcerates early.

There are few subjective symptoms until the lesion has reached about .3 or .4 of an inch in size and has involved other parts. The patient may then complain of a scratching or burning sensation, reddening of the eye or increased flow of tears. Because of the mild symptoms and slow-growing nature of the tumor, patients frequently delay seeking medical aid.

Science News Letter, March 7, 1953