



TILT-FLOAT DESIGN—Boeing's tilt-float helicopter provides an exceptionally steady platform for an indefinite period without power. Still in the design stage, the tilt-floats are extended prior to landing in the water.

PHYSIOLOGY

Pink Spots Spot Schizoids

Pink spots found in the urine of a number of schizophrenics support the theory that abnormal metabolism may be either the cause or the effect of schizophrenia.

► "PINK SPOTS" have been found in the urine of a large group of schizophrenics, lending support to the theory that abnormal metabolism is associated with schizophrenia, the most common mental disease.

Four separate tests with 808 individuals, including the healthy as well as the sick, were conducted at the University of Liverpool, England. Experimenters were Drs. P. Harper and Shirley A. Leslie; Profs. C. A. Clarke and P. M. Sheppard; A. Pauline Ridges and R. E. Bourdillon.

They conclude that the pink spot, considered to be a compound with the long name of 3,4-dimethoxyphenylethylamine (DMPE) is "highly associated" with schizophrenia in its strict clinical sense. Only two out of hundreds of mentally "normal" people used as controls had the spot.

Other implications aside, the Liverpool study should clear up controversy surrounding the existence of this spot in schizophrenics.

Dr. Arnold J. Friedhoff of the New York University School of Medicine first discovered the urine spot three years ago. Since then other experimenters have reported conflicting results. One Japanese test came up with completely negative results, having found the spot in half its normal control subjects.

However, no prior test has matched the scale of the one reported in *Nature* 208:452, 1965.

3,4-DMPE is an abnormal product of metabolism. It has close relationship to the hallucination-producing mescaline.

As yet there is no proof that disturbed metabolism is a cause of schizophrenia or that the pink spots signal the abnormality.

Dr. Harper, who is continuing study at the Rockland State Hospital in Orangeburg, N.Y., declined to speculate on a connection.

However, the National Institute of Mental Health last year reported that the pink spot findings are "clearly compatible" with the theory of abnormal metabolism as a cause of this crippling and little understood mental illness.

Normally the body changes chemicals of the methyl group in a process called transmethylation.

In the abnormal metabolism theory the body produces excessive amounts of methylated substances capable of inducing schizophrenia.

The English test also found that pink spots did not occur in patients suffering from other mental illnesses.

• *Science News Letter*, 88:323 November 20, 1965

PSYCHOLOGY

Predelinquent Behavior Hostile and Aggressive

► POTENTIALLY DELINQUENT children have powers of persuasion and observation beyond their years.

Their mental abilities range from average to above average and are combined with hostile, antipersonal attitudes. The result is potentially dangerous behavior, contends Dr. J. M. Stubblebine, a University of California psychiatrist recently appointed program chief of San Francisco's Community Mental Health Service.

The psychiatrist evolved his personality sketch of the potential delinquent through several years of work in juvenile facilities,

among them the Marin County Juvenile Hall in San Rafael, Calif.

The personality qualities he calls pre-delinquent behavior are found in children of all economic levels, Dr. Stubblebine told *SCIENCE SERVICE*.

Too often, instances of antipersonal behavior in the classroom or on the playground are considered normal aggression. The delinquent is not recognized until he commits a crime.

Before that, however, he signals his latent delinquency by consistently making other people uneasy, angry or defensive. For example, the child who is asked by his teacher why he is out of his seat and replies with a "sweet bland expression, 'I am just going to get a drink,'" is trying to put his teacher on the defensive. The motivation is hostile, observed Dr. Stubblebine.

Another indication of the latent delinquent is the child who makes mischief and yet stays out of it, Dr. Stubblebine pointed out.

To satisfy his antisocial needs, the potential delinquent must be able to "observe most keenly other people's behavior and speech" and use it to his advantage.

Not all antipersonal behavior becomes antisocial or criminal, Dr. Stubblebine cautioned. However, he believes that the desire to be a backstage irritant, and the repeated attempts to provoke defensiveness in other people are a "necessary prelude" to later delinquency.

Dr. Stubblebine's observations were published in the *Mental Hygiene* quarterly, 49:538, 1965.

• *Science News Letter*, 88:323 November 20, 1965

MEDICINE

1965 Lasker Awards Go to Sabin, Holley

► DR. ALBERT B. SABIN, who helped to conquer poliomyelitis through his development of an oral vaccine, is the winner of the 1965 Albert Lasker Clinical Research Award. Dr. Robert W. Holley is the winner of the Lasker Basic Medical Research Award for his achievement, with his collaborators, in determining the chemical structure of nucleic acid, a substance that helps to direct the development of form and function of all living things.

Dr. Sabin, born in Poland in 1906, has seen the virtual culmination of his work through children throughout the world who have been saved from a crippling disease. He is chief of the division of virology and cancer research, Children's Hospital Research Foundation, Cincinnati, Ohio.

Dr. Holley, born in Urbana, Ill., in 1922, is in a sense at the beginning of further work on the genetic code in man, which may conceivably open the door to the correction of various forms of inherited diseases. He is professor of biochemistry at the New York State College of Agriculture, Cornell University, Ithaca, N.Y.

Each award carries with it a stipend of \$10,000, a gold statuette of the Winged Victory of Samothrace that represents victory over death and disease, and an illuminated citation.

• *Science News Letter*, 88:323 November 20, 1965