

## PSYCHOLOGY

# Speaking Equal to Thinking

SPEAKING and thinking have about the same function for human beings.

Both require the ability to handle abstractions, Dr. Kurt Goldstein of the New School of Social Research in New York told a conference on the Fundamentals of Psychology sponsored by the New York Academy of Sciences.

Both speaking and thinking follow laws of their own that become effective differently according to the requirements, he said. He based his conclusions on results of his study and treatment of patients with damage to the brain cortex.

In language and thinking, we must consider an active kind determined by the individual capacity of abstraction, and a passive kind made by the use of abstraction. The passive use of language and thinking is more and more automatic, prompted by stimulation both from the outside world and from inside the person.

Neither speaking nor thinking can come to full development alone. The disturbance of one manifests itself also in modification by the other, Dr. Goldstein said.

The impulse to speech always comes from thinking. Even if outside events stimulate a person to speak, thinking still plays a dominant part. During active thought, the processes that stimulate a person to speak and to store fixed thoughts, become active.

Although words are used to "jell" thoughts, language is not just a substitute for thinking. Language has a function of its own, said Dr. Goldstein. It enriches man's behavior and makes possible the higher form of self-fulfillment which is essentially different from that in animals.

Science News Letter, May 14, 1960

## Creativity Must Be Free

CREATIVE THINKING is helped by doing the whole job rather than by extreme division of labor.

This was reported in New York by Dr. Abraham S. S. Luchins of the University of Florida, Miami, to a conference on the psychology of thinking, sponsored by the New York Academy of Sciences.

A relatively high degree of freedom of action is also involved in creative production, he said.

Yet while creativity is highly individual, it is also a social concern. Society helps determine what will be considered creative.

Science News Letter, May 14, 1960

## Genius Needs Recognition

A GENIUS, in order to be one, must be recognized as such by society. Creative thinking must be recognized by others as having practical or aesthetic value to be meaningful, Dr. Livingston Welch, of Hunter College, New York, told the conference on the psychology of thinking, sponsored by the New York Academy of Sciences. He said that the machinery involved in creative thinking is much the

same as that of simple problems of everyday life or in the very often original thinking of the insane mind.

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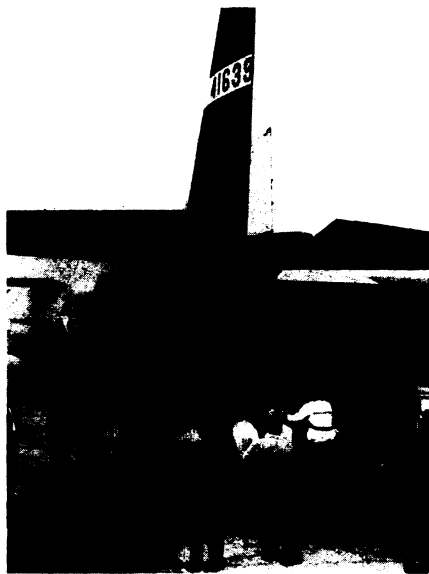
## PSYCHOLOGY

## Vocabulary Loss Follows Operation on Brain

BRAIN SURGERY of the type called topectomy used in the treatment of mental illness causes a loss of ability to understand words, Dr. Roy M. Hamlin of the University of Pittsburgh and Dr. Elaine F. Kinder of Rockland State Hospital, Orangeburg, N. Y., reported to the Midwestern Psychological Association meeting in St. Louis.

In the operation 35 grams of tissue was removed from the frontal lobes of both sides of the brain. The operation did not affect the area of the brain known to control speech. The vocabulary loss showed up on tests given the patients ten years after the operation. A comparison group of patients who were not operated on showed a vocabulary gain during the same period.

The loss in the operated patients was not large but it was statistically significant in relation to the comparison group who had all gained in knowledge of words. The 40 operated patients studied were all suffering from schizophrenia, the most common of the mental diseases. They had been in the Rockland State mental hospital for 12 years. All could read and write.



**15 NUCLEAR TONS**—A test package representing one section of a nuclear power plant, weighing 15 tons, is loaded into a C-130A aircraft at The Martin Company's airport in Baltimore. The plant is being built by Martin for the U.S. Atomic Energy Commission and will be installed next year at Sundance Air Force Station, Wyoming.

This finding of vocabulary loss confirms similar past findings on men whose brains were injured by gunshot wounds in the war or by accident.

Science News Letter, May 14, 1960

## PSYCHOLOGY

## Guess Car Speed Slower Than It Actually Is

A POLICEMAN following your car on the highway may be able to tell accurately whether you are going faster or slower than he is, but the policeman's tendency will be to underestimate your actual speed rather than overestimate it.

This is indicated by Drs. Paul L. Olson and Herbert J. Bauer of General Motors' Research Laboratories on the basis of experiments using experienced drivers, not policemen. They reported their findings to the Midwestern Psychological Association meeting in St. Louis.

The experienced drivers drove at 40 miles an hour while a car ahead of them moved at various speeds, accelerating in ten-mile jumps to speeds as high as 70 miles an hour.

The gap between the two cars was set at one-tenth or two-tenths of a mile, and drivers in the following cars were asked to judge the speed of the leading car. Results showed that the drivers could judge accurately whether the distance between the two cars was increasing or decreasing. About 40% were able to judge the speed of the leading car accurately. The evidence indicated that most people, however, tended to underestimate the speed of a leading car.

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## PSYCHOLOGY

## Different Personalities Work Better Together

A SMALL WORK GROUP can reach a better solution for a problem if the individuals working together have quite different personalities than if they are alike, Drs. L. Richard Hoffman and Norman R. F. Maier of the University of Michigan told the Midwestern Psychological Association meeting in St. Louis.

This was learned when the psychologists set up 41 four-person groups to work out solutions for problems. In picking persons for 16 of the groups, they selected people who were alike in performance on a temperament test. Another 25 groups were composed of persons who scored differently.

A larger proportion of high-quality solutions were turned in by the groups containing different personalities. Mixed groups did better than all-male groups. And the quality of solutions by like-minded people appeared to get worse as the people continued to work together.

Group members were asked to report how well satisfied they were with the solutions reached. Satisfaction with the decisions, it was found, depends more on the amount of influence they felt they had on the decision rather than on the quality of the solution.

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