

## SOCIOLOGY

# Find Key to Genius

The key to genius needs early recognition. Feeding, fighting and sexual activities are believed controlled by related nerve structures, Lillian Levy reports.

► THE KEY to genius is visible in the preschool child, but early recognition is urgent if this human resource is not to be wasted, Dr. Annette Rosenstiel, sociologist at Mills College of Education in New York, emphasized.

Only one percent of the nation's children may be classified as genius, she reported to the American Association for the Advancement of Science meeting in New York. U. S. Bureau of the Census statistics show that gifted children from five to 18 total 632,551. Under five there are approximately 200,000 gifted children.

"It is to this small group of one percent that we must look for the superman of the atomic age, and it is in the preschool group that we must concentrate to build for the future," she said.

Dr. Rosenstiel deplored the present tendency among adults to emphasize patterns of socialization and interpersonal relations rather than the development of mental ability in children.

"By the time a child goes to school, his early curiosity may have been blunted, his eager probings for knowledge thwarted, his questioning sidetracked, and his desire for learning dulled by what to him may appear to be adult disinterest and actual opposition," she noted.

Disturbed children often result from this adult rejection of the probing and questioning of a child. She said that the gifted child who is encouraged to develop his potential is "somewhat healthier and better adjusted than the average child."

Dr. Rosenstiel recommended nursery school experience as one way of providing an environment by which the child's general intelligence may be enriched. A child, however, should not be judged merely on his I.Q., which is based on cultural memory and on past achievements, but on his anticipated peak of development, what Dr. Rosenstiel calls his P.I.Q. or potential intelligence quotient.

P.I.Q. is based not only on demonstrated acquisition and achievement, by which I.Q. is measured, but on qualities such as curiosity, interest, determination, persistence and learning, and striving after higher goals.

Parents can do most to identify the gifted child, she said, and urged a "do-it-yourself" project for this identification, which has to be a joint undertaking of parents and the child.

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## Eating, Fighting and Sex

► FEEDING, FIGHTING and sexual activity appear to be controlled by closely related nerve structures in the brain, Dr.

Paul MacLean of the National Institute of Mental Health, Bethesda, Md., reported at the American Association for the Advancement of Science meeting in New York.

Experiments with squirrel monkeys showed that an electrode passed over the transitional region of the brain mechanisms associated with these activities aroused simultaneously sex responses, hunger behavior and fearful, or angry-type behavior.

The close tie-in with oral and sexual manifestations together with anxiety, fear and aggression demonstrated in the squirrel monkeys may give some insight into human behavior, Dr. MacLean said.

"The findings would seem to shed some light on psychiatric observations that the acts of destroying, devouring, sustaining and procreating all seem inextricably tied to one another," he said.

He noted that Freud in his monograph on the theory of sex commented on "the sexually exciting influence of some painful effects such as fear, shuddering and horror."

Dr. MacLean observed that often first sexual impulses in young boys have occurred during wrestling and grabbing encounters.

Dr. MacLean's study of the squirrel monkey behavior also showed that the mere

act of one of the animals looking into the eyes of another arouses aggression and sexual response.

In disturbed humans, looking into the eyes has been observed to arouse panic, particularly in schizophrenic patients. The looking impulse is particularly evident in children, who unselfconsciously contemplate their bodies and the nakedness of others. In adults, looking at the human body often arouses sexual impulses.

Dr. MacLean said also that in man there appears to be a direct relation between feeding, sexuality and altruism. He believes there is evidence that altruism such as is expressed in the concern for the welfare of others, the good deed, and even such work as is done by scientists to keep human progeny from suffering and dying is related to sexuality.

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## Classroom Discipline

► CLASSROOM DISCIPLINE is the number one school problem practically everywhere, but it is more acute in United States schools, a University of California at Los Angeles educator reported following a six-month study tour of 14 European and Middle Eastern countries.

The causes and solutions vary from nation to nation, Dr. Lawrence E. Vredevoe told the annual meeting of the American Association for the Advancement of Science in New York.

Students may be cheered by the news that caning and paddling, well-applied remedies for breach of class-room discipline, are becoming less respectable. However, in at least one private European school, parents



**PLANT GROWTH ROOM**—Control of plant growth is the practical aim of basic research conducted in this room at the U. S. Department of Agriculture's Research Center, Beltsville, Md. Growth characteristics of seeds and plants, the effectiveness of fertilizers, weed killers, anti-insect chemicals and disease are tested in the growth room provided with General Electric fluorescent lamps and 100-watt bulbs.

are still charged for canes as a "medical" expense.

Comparing discipline problems in the U. S. with those abroad, Dr. Vredevoe listed some factors that make it harder to enforce discipline in the U. S.

Among the factors are lack of one dominant culture or religion, confused standards and attitudes toward law enforcement, longer and more rigidly enforced compulsory education, use of cars by many high school students, population mobility, resulting in more transfers and less home stability, confused attitudes about discipline and authority in the home, and shortage of competent administrators and teachers to meet the demand of a rising enrollment.

Schools in the U. S. often are asked to play the role of parent and church, "an impossible task," Dr. Vredevoe said. Despite

the discipline handicap in the U. S. school systems, Dr. Vredevoe found certain advantages in the systems here not generally shared in Europe or the Middle East.

Among U. S. advantages are the closer relationship between home and school, emphasis on the worth of the individual and broad opportunities regardless of social or economic background; the comprehensive secondary school program that can be varied according to the abilities of individual students, and improved professional status of the American teacher.

He also called attention to the recent status rise in the U. S. of the "egghead" in secondary schools, and the accompanying decline in the athlete and hot rodder.

There also is much greater research here in the areas of child growth, development and guidance.

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#### EDUCATION

## Students Are Uninformed

► COLLEGE STUDENTS are poorly informed about current affairs, Dr. Josef E. Garai of the Staten Island Community College reported.

They know more about entertainment, sports and well known brands than the important issues of the day and the persons involved in them, he reported at the annual meeting of the American Association for the Advancement of Science in New York.

Dr. Garai questioned 437 students enrolled in five of the leading colleges in the metropolitan New York area to determine the level of their information on events of the day. Eighty-one questions required identification of persons, places, objects or issues of importance in political life. Twelve of these referred to people or events in the entertainment or sports world and to certain brand names.

Only 17% of the students knew the name of the U. S. Secretary of Defense; only 5.1% knew the name of the Secretary of Health, Education and Welfare; 4.6% knew the name of the capital of Australia; and in this space age, only 7.4% knew the

weight of the heaviest satellite (5 tons) still circling the earth and the name of the launching country (Russia).

However, 65% were familiar with the comic page character Pogo; and 61% knew that entertainer Ernie Kovacs is married to Edie Adams.

The colleges involved in the study are the Juilliard School of Music, Staten Island Community College, New York University School of Commerce, Pratt Institute and Hunter College. Since 1958, however, there has been a rise in the general level of information among these students, a comparison of a study made then with the 1960 study showed.

The information level and awareness of present day world issues increased remarkably, however, among a group of students queried who were required to read the New York Times daily. Testing showed a score rise from an initial average of 18% on a pretest before the start of the compulsory news reading in February, 1960, to 49% in March, 68% in April and 80% in May.

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#### PUBLIC SAFETY

## Many Reactor Accidents

► THE FATAL ACCIDENT at the Idaho test station Tuesday night (Jan. 3) is not the first reactor mishap in the history of the United States Atomic Project to cause injury or death as an Atomic Energy Commission spokesman has claimed.

There have been at least two deaths and more than 30 injuries, resulting in burns, radiation sickness and even amputation from AEC reactor accidents. But these are from accidents in "critical experiments facilities" reactors as distinguished from "operating" reactors, the AEC spokesman told SCIENCE SERVICE.

The critical experiments facilities are used for the testing and study of fissionable materials at various degrees of enrichment and different shapes. They differ from operating

reactors only in that the fuel assembly is flexible rather than fixed in order that the assembly may be changed quickly and easily according to the test being made.

In the experiments facilities, the experimental chain reaction is maintained at or near zero power so that little radiation is emitted. Operating reactors, which produce nuclear materials, often are maintained at high levels of power.

The Idaho reactor in which the recent explosion occurred is neither the experimental or the operating type of reactor. It is a "prototype" of the operating type of reactor, Mr. Dan Hayes of the AEC office of health and safety said. The Idaho accident was the first fatal accident connected

with this kind of prototype reactor, he said, but not the first reactor accident.

He said the accident may have resulted from a chemical reaction, evolution of hydrogen, a booster-type explosion, or "criticality" (a running away, so-to-speak, of the chain reaction).

Neither the cause of the accident nor the full extent of damage or exposure will be known for some time. Decontamination and investigation must proceed slowly, Mr. Hayes said, to avoid undue risk from radiation to those persons involved in examination and cleaning-up of the site.

The explosion, which caused the death of three men, occurred about 40 miles from Idaho Falls, a city of about 34,000 people.

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