

PSYCHOLOGY

# Colleges Are Schizophrenic, Psychologist Tells Meeting

Failure to Meet New Situations, "Childish" Inability To Manage Own Affairs, Pointed Out as Symptoms

AMERICA's colleges are schizophrenic, Dr. James L. Graham of Lehigh University, told the meeting of the American Psychological Association at Evanston, Ill.

Their mental illness is curable, he indicated. The present world emergency may be the shock that will bring them out of their daydreams into today's realities just as individual mental patients are shocked into sanity with huge doses of insulin or metrazol.

Symptom of the mental illness of colleges, Dr. Graham said, is their failure to change their methods of education to meet changes in our culture from what it was in pioneer days. Parallel to the schizophrenic's regression to childish ways is the college's failure to assume control of its own funds and policies.

Like the schizophrenic, they, too, cling to rituals and are preoccupied with affairs that avoid facing reality emphasizing the developments of individual leadership and rewards in terms of grades or degrees.

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## Drivers' Defective Vision

DRIVERS with vision below the oculist's rating of 20/30 should be restricted in speed when driving at night, Dr. A. R. Lauer, of Iowa State College, told the meeting. A 30% loss in visual acuity makes it necessary for a driver to have double the light in his headlights that a normal person needs in order to see against the glare of oncoming headlights.

The angle at which the opposing headlight glare hits the eye of the driver is important in affecting his vision, Dr. Lauer found in experiments in which persons in a dark booth tried to read or see dolls in a miniature roadway. Depressing the headlight beam when passing reduces the glare effects to about one-fourth of that experienced with a high beam.

One of the most important factors in reducing vision through glare is the sidewise angle of the approaching light. If it is only one degree from the line of sight, the glare effect is three times

what it is at three degrees. Look toward the right shoulder of the road to cut down the glare, Dr. Lauer advises.

It is not necessary to cut down on the brightness of headlights to eliminate glare, in Dr. Lauer's opinion.

"Since headlights, as made today, will not give over one foot candle at the eye height of the driver when meeting a car," he said, "it seems the intensity could be materially increased without producing hazards of glare."

If you walk in the roadway and want to be seen by a driver facing headlight glare, wear light-colored clothing. It takes only about one-fourth as much light for the driver to discern light objects in the face of oncoming lights as it does to see dark objects.

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## "Lie-Detector" Doesn't

THE so-called "lie detector," which measures changes in the electric resistance of the skin when the suspect hears embarrassing things said to him, would not work very well with drug addicts.

The ordinary level of skin resistance is increased by morphine addiction, Dr. Ralph R. Brown, of the U. S. Public Health Service Hospital, at Lexington, Ky., has found. But the size of the telltale changes in this resistance at disturbing words is decreased. There is less difference between the instrument reading at disturbing words and its reading at words not emotion rousing.

Withdrawal of the drug brings a marked increase in the response to words, especially words concerned with sex.

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## Education Aids Morale

MORALE, or a good fighting spirit, may depend more on internal factors within the individual than it does on pep talks or the circumstances he faces, the psychologists learned from a report by Dr. Goodwin Watson of Teachers College, Columbia University.

Men with a college education have better morale, Dr. Watson found, than men who have not finished high school.

Married men and men with several dependents have better spirits than do single men and men without such responsibilities. Men with any sort of religion have better morale than those with none.

Study of different occupations revealed that morale is lowest among those working at skilled or semi-skilled trades, in factories, or as clerks in offices. It is highest among writers, salesmen, teachers and students.

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## Psychological Defense

AN ALL-OUT contribution to national defense, broader than military psychology, was urged on psychologists by Dr. Edgar A. Doll, director of research at The Training School, Vineland, New Jersey. Dr. Doll spoke as president of the American Association for Applied Psychology.

At least five major areas of psychological usefulness must be encompassed, he said, in such a total program:

1. The armed forces, where psychologists can aid in selection, training and classification of men, in preservation of morale, and psychological warfare.



GREEN VS. WHITE

An American soldier tries out the new reversible ski uniform, wearing outside the forest green that blends with conifers. (See page 168)

2. Business and industry.
3. Agriculture.
4. Home defense.
5. Psychology itself, where scientists must be given training for new duties and new students must be trained.

Mentally defective men have very little place in the mechanized military forces of modern warfare, Dr. Doll said. The psychologist's job in this area, therefore, is partly to keep mental defectives from induction.

But mental defectives can play an important part in national defense if properly directed by psychologists, he indicated.

In industry and in distribution, there are many tasks which can be done successfully by mental defectives, releasing mentally normal men for military duty.

In home defense, there are also tasks

that can be undertaken by the dull.

"It behooves us," Dr. Doll said, "to study the experience in this regard in England where the role of the mental defective in home defense has received special attention and has produced effective results."

On the farm, the unskilled tasks and social conditions favor the employment of mental defectives.

Anticipating the possible role of public institutions for the feeble-minded in case of war, Dr. Doll prophesied:

"It is not inconceivable that institutions for the feeble-minded might become hospital centers in respect to which many useful services might be performed by high-grade mental defectives, both men and women."

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If the moon had absolutely no atmosphere at all, Dr. Marshall said, meteors should strike its surface with their average space velocity of 30 miles a second. In that case, we ought to observe the larger ones striking as pinpoint outbursts equal in brightness to a first-magnitude star, and occurring once in every three or four days. Furthermore, if no air slowed them down, one or two craters large enough to be seen in our telescopes should be made on the moon every year. No permanent changes of this nature have ever been detected, although lunar formations a few hundred yards across have been repeatedly observed.

According to Dr. Marshall, the sizes of lunar craters, especially the hundreds measuring upwards of four and five miles, uphold the volcanic theory. A lunar crater 40 miles wide ought to be 10 miles deep, if formed by an explosion or by the impact of a huge meteor. But some lunar craters have floors which are level with or higher than the plain outside, or even dome-shaped, similar to the laccoliths found on the earth.

Laccoliths are terrestrial formations produced by the flow of lava and igneous material underneath the surface layers of the earth, causing a swelling upward into a dome or bubble. The bursting or subsiding of such bubbles has produced the craters of Hawaii, which are markedly different from the craters of volcanoes, such as Vesuvius.

Lava flows have covered great portions of the moon and the earth alike, making the so-called lunar seas and the formations which eventually became the moon's craters. Some lunar laccoliths are still seen in an arrested state, some have domes a mile or more high, others have begun to collapse. Dr. Marshall showed photographs of the moon illustrating all stages of such development.

The lunar atmosphere may contain carbon dioxide, the astronomer from the Franklin Institute said, and possibly oxygen, since these are the heaviest gases in the earth's atmosphere, and might remain on the moon long after lighter gases, such as hydrogen and water vapor had escaped. Even the theories of Sir James Jeans, which have been considered as conclusively denying the moon an atmosphere, do not prohibit the presence of carbon dioxide in appreciable amounts.

Observations of occultations of stars by the moon will not reveal this carbon dioxide air around it. Nor will the flashes of even brilliant meteors in the

#### ASTRONOMY

# Moon's Craters Not Made By Meteor Bombardment

## Earth's Satellite Has Atmosphere Which Protects Its Surface; Craters Mainly Due to Volcanic Action

**A**N OBSERVER on the surface of the moon would see as many "shooting stars" in its dark, star-filled sky as are seen at night here on the earth, declares Dr. Roy K. Marshall, of the Fels Planetarium, Philadelphia. This contradicts directly the statements found in most texts and popular books on astronomy that the moon has no atmosphere, and that the thousands of craters on the moon were formed by the impact of enormous meteorites during past ages.

Dr. Marshall presented his thesis before the American Astronomical Society, at Yerkes Observatory. His paper was presented for the purpose of bringing to the attention of astronomers existing theories which had been overlooked or forgotten, Dr. Marshall stated. This is particularly because popular writers have recently devoted so much space to the meteoric theory and so little to the proposal that the moon's craters are the result of volcanic action.

The tendency to compare Meteor Crater, a huge pit in the Arizona plateau, with the superficial appearance of lunar craters, has resulted in the misinterpretation of other facts about the

moon. For instance, our satellite has an appreciable atmosphere which is as effective in destroying meteors as is our own air. Owing to the low surface gravity of the moon, where a 150-pound man would weigh only 25 pounds, the density of the moon's air might be only one-millionth that at the earth's surface, but the two atmospheres would be of equal density at a height of 84 miles. Above this point, the moon's air would be denser than the earth's.

For the earth, the average "shooting star" starts to shine at a height of 80 miles, and so it would on the moon. It will not be slowed down as quickly in the moon's thinner air at lower levels, but would burn up just about as fast as in the earth's air. Seldom would a meteor strike the lunar surface hard enough to produce a crater, just as on the earth, where in the past 100,000 years or so only 200 or 300 meteorites have struck which could make real craters. The number for the moon is only 20 or 30 meteorites, and in that time there would be practically none producing craters as large as Meteor Crater, which is nearly a mile wide.