

behavioral sciences

PSYCHOLOGY

Brain waves and meditation

Although meditation is a traditional practice in many Eastern religions, Western scientists have done little investigation of the phenomenon. Meditation is becoming more popular in the United States, however, and scientists are beginning to take a closer look.

Dr. Robert Keith Wallace, a physiologist at the Center for the Health Sciences in Los Angeles, recently examined 15 American college students who were practicing transcendental meditation, as taught by an Indian philosopher, Maharishi Mahesh Yogi. During meditation, he reports in the March 27 *SCIENCE*, their heart beat rates and rates of oxygen consumption decreased significantly. Electroencephalograph recordings showed a predominance of slow-frequency alpha brain waves, with occasional periods of even slower theta waves.

These physiological patterns, says Dr. Wallace, are markedly different from those of normal consciousness, and also from those of sleep, dreaming or hypnosis. He speculates that the characteristic state of meditation may have practical applications in relieving tension.

RACIAL PSYCHOLOGY

Segregation and self image

Black students in segregated schools may, at least sometimes, think better of themselves than black students in integrated schools. They may also have a more positive concept than white students generally.

Dr. Gloria Powell and Marielle Fuller of the Neuropsychiatric Institute at the University of California in Los Angeles reached these conclusions on the basis of a survey of junior high schools in a central Southern city. They reported the results to an American Orthopsychiatric Association meeting in San Francisco. The survey made no reference to racial issues or identity, but asked students to rate how they feel about themselves.

These self-concept findings are in direct opposition to previous studies of the negative effects of segregated schools.

Dr. Powell points out that the survey was given shortly after the death of Dr. Martin Luther King and the Poor People's March on Washington. Consequently, she says, it may have measured a new mood of racial pride.

AUTISM

Serotonin levels high

Autistic children are often so withdrawn from reality as to be inaccessible to ordinary therapeutic methods. Many investigators, therefore, have been searching for the presence of an organic pathology in cases of autism.

A study headed by Dr. Edward R. Ritvo of the Neuropsychiatric Institute at the University of California at Los Angeles has demonstrated a significantly higher level of serotonin in the blood of autistic children than in normal children of the same age. He reported the experiment at the Orthopsychiatric Association meeting.

Serotonin, though present in most cells of the body, is believed to be important in regulating the brain stem and the central nervous system. The brain stem, and

particularly the reticular formation, may play a crucial role in the sleep-pattern abnormalities that earlier investigations have revealed in autistic children, Dr. Ritvo suggests.

The sleep patterns and the serotonin levels of autistic children are similar to those of normal children of younger ages. Dr. Ritvo concludes that autistic children may suffer from a maturational delay or a retardation of the central nervous system.

SOCIOLOGY

Churches and social issues

Church leaders and religious groups in the United States have taken an active stand on the controversial political and moral issues in recent years. Yet, say Drs. Rodney Stark, Bruce Foster, Charles Y. Glock and Harold Quinley, sociologists in the University of California at Berkeley, it would be a mistake to think that churches in general are becoming a significant force for social progress.

On the basis of a random sample of Protestant ministers in California, Drs. Stark, Foster and Quinley find that most clergymen espouse neither liberal nor conservative social attitudes. Most of them, the survey showed, never even mentioned topics such as the Vietnam War or the California grape workers' strike in their sermons. The more orthodox a minister was in his doctrinal beliefs, the less likely he was to speak out on matters of social concern. The researchers conclude that "reform movements within the church have had little success at the parish level, where most communication between the clergy and the laity takes place."

EDUCATION

Subtleties and television

Although educators have long been interested in the use of television for teaching, the relative merits of live versus televised instruction have been little explored.

A teaching experiment recently conducted with students at the New York State Psychiatric Institute suggest that television is more effective in the teaching of strictly factual material, but less effective in getting across more subtle matters of value and attitude. A group of students who were instructed in the techniques of psychiatric interviewing and clinical neurology via television learned the material better than did a control group of students who were taught the same material by live instructors.

Yet, report Dr. James H. Ryan of the New York State Psychiatric Institute and Dr. Stanley Budner of Fordham University School of Social Research in the April *AMERICAN JOURNAL OF PSYCHIATRY*, the control group seemed to have picked up the indirectly expressed attitudes of their instructors better.

The live-teaching group turned out more similar to the norms of their instructors on general attitude measurements, such as agreement with the statement, "A good psychiatrist never gets discouraged." Drs. Ryan and Budner conclude that a live teacher may be critically important if students are to pick up professional attitudes, which are often not explicitly taught.