

behavioral sciences

METHODOLOGY

Deception selfdefeating

In order to perform clinical tests of complex phenomena such as motivation, anxiety and stress, psychologists sometimes set up deceptive experiments. They may deliberately misinform the subject concerning the purpose of the experiment, issue false instructions and employ props that are actually unrelated to the experiment in the hope of creating a particular frame of mind or expectation in the subject.

Experiments using deception have been on the increase, Dr. Julius Seeman of George Peabody College reports in the November *AMERICAN PSYCHOLOGIST*. Between 1948 and 1963, the percentage of deceptive experiments reported in the *JOURNAL OF ABNORMAL AND SOCIAL PSYCHOLOGY* increased from 14.3 percent to 36.8 percent; in the *JOURNAL OF PERSONALITY*, from 23.8 percent to 43.9 percent. In these fields of psychology, Dr. Seeman feels, deception is in danger of becoming "the method of choice."

A subject is usually informed of the deception at the end of the experiment. Even so, the fact that he has been deceived once may make him an unsuitable subject for any future experiments. Dr. Seeman states that when the subjects are themselves patients, as is often the case, the use of deception undermines their confidence in the therapy.

ANIMAL PSYCHOLOGY

Dinosaurs under stress

The mysteriously sudden extinction of dinosaurs at the end of the cretaceous period may have been due to psychological stress, Prof. H. K. Erben of Bonn University told a Paleontologist's Association Congress in Kiel.

Electron microscope examinations of dinosaur eggs from the late cretaceous period show a pathological excess of calcium in the shells. Some eggs had as many as seven layers of shell, Prof. Erben says.

Excessively thick shells are occasionally found in birds and turtles today. Veterinarians attribute the excess to a malfunctioning of the pituitary gland occasioned by stress.

In the case of the dinosaurs, the stress probably resulted from changes in the environment that made life increasingly difficult. However, Prof. Erben notes that the calcium excess might also have been due to genetic mutation.

EDUCATION

The invisible university

The National Research Council of the National Academy of Sciences reported this week that the number of students engaged in post-doctoral research and training amounts to "an invisible university."

Between 1960 and 1967 the number of post-doctorals has roughly doubled. There are now at least 16,000 such students, the council estimates, mostly doing research in the science fields.

The council feels that the rapid growth of post-doctoral education is a "basically healthy development,"

since it helps recent graduates to become independent investigators and gives them a chance to explore their fields before settling on a career.

Post-doctorals should be recognized as "an important component of the educational scene," the council recommends, but universities should continue to reserve post-doctoral fellowships only for students of exceptional quality.

PSYCHIATRY

Diagnosing schizophrenics

A peculiar form of disassociated eye movement called microstrabismus may be characteristic of schizophrenics, according to investigators at the Western Psychiatric Institute and Clinic of the University of Pittsburgh Medical School.

In microstrabismus, a person's eyes move in divergent directions or at divergent speeds. The divergences are too minute and too rapid to be noticed under ordinary conditions.

Drs. William S. Condon, William D. Ogston and Larry V. Paoe report in the October *JOURNAL OF ABNORMAL PSYCHOLOGY* that they were able to detect the presence of microstrabismus in a patient suffering from a case of multiple personality by analyzing a film of the patient frame-by-frame.

The film contained scenes of a woman (the same woman who was subject of the book and movie *The Three Faces of Eve*) at various stages in therapy and in various personality organizations. The frequency of microstrabismus declined as therapy progressed and the more exotic personalities began to disappear, the researchers note.

Microstrabismus has been noticed in films of other schizophrenics but not, so far, in films of normal persons. To date Drs. Condon, Ogston and Paoe have analyzed more than 100 films frame by frame. The condition may thus prove to be a useful technique in diagnosing schizophrenia.

ARCHEOLOGY

The fall of Crete

The decline of Minoan civilization has been attributed to various causes, including the eruption of a volcano some 100 miles to the north of Crete. An Australian psychologist, Dr. Evan Davies, now suggests that the decline may have been due to a gradual deterioration of the need for achievement.

Tests measuring the need for achievement were first developed by Prof. David McClelland of Harvard University. In works of art, the test finds a high need for achievement is associated with such traits as diagonals and s-shapes, unconnected lines and an avoidance of continuous wavy lines.

Applying these criteria to the decorations on Minoan pottery, Dr. Davies reports, in the November *PSYCHOLOGY TODAY*, that the need for achievement in Cretan culture fell steadily between 2600 and 1400 B.C. He concludes that an invasion or a volcanic eruption would "simply have been a coup de grace for a civilization that was already on its last legs."