

Science, the media and the paranormal

answer to a question. The young teachers were placed before a control panel with a 20-step dial that they believed set the level of the shock from slight to "extremely dangerous" (marked with the sketch of the head of a skeleton). As in Milgram's experiments, the machine did not actually transmit an electric shock, but the youngsters were convinced that it did, particularly when they heard the learners in an adjacent room pound the walls and scream in pain from steps 14 to 16, and fall silent after step 16 (as they were coached to do by the researchers).

All the while, the youngsters were consistently ordered to administer the shocks for the sake of the experiment, despite the sounds of pain they heard from the next room. A control group of children was given the option of either giving or not giving the shock when a mistake was made.

The researchers report in the July JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY that 73 percent of the test children continued to deliver shock all the way to the end of the scale, whereas only 16 percent of the control subjects did so. No significant differences were found between sexes or within the 10-year age range. Those youngsters who continued to administer shock above level 14 were classified as overobedient, because they went on with the test even though they could hear the protests and ultimate silence of their learners. In cases where the young teachers hesitated after hearing cries or reactions, they were urged on with orders such as, "The experiment requires that you continue," or, "You have no other choice but to continue." When asked after the sessions why they continued to punish the learners, 69 percent of the females and 40 percent of the males said it was because they were obeying orders, and 30 percent of the females and 60 percent of the males said it was because "punishment is beneficial for learning."

Yahya and Shanab, who is also on the faculty of California State University at Fresno, conclude "that this study has revealed not only that obedience and overobedience are culture free but that such behavior is observed very early in life." Such results, they add, identify orders as the critical variable and "rule out explanations that tend to depict humans as being aggressive in nature."

Milgram told SCIENCE NEWS he is "not surprised" that his findings appear to hold with children in a different culture. Children, he reasons, "have less reason not to be compliant than adults," who are more prone to conflict over "whether or not to go along with authority."

"I'm glad to see this [the experiment] done with a non-European culture," says Milgram, a psychology professor at the City University of New York's Graduate Center. "It adds a little strength or support to the universality of [my] findings" and shows that "obedience is not just a United States phenomenon." □

The NBC network's penchant for telecasting documentary-format features like "Outer Space Connection," "Bigfoot," "The Bermuda Triangle," and "In Search of Noah's Ark" was called "in scientific terms, a scandal."

Robert Sheaffer, a UFO analyst, described results of two of his recent investigations. One showed that a UFO report filed by Jimmy Carter when he was governor of Georgia, bannered by the National Enquirer last year and given front-page treatment by the Washington Post this year, was in fact a sighting of Venus. The other looked into a photo in the August SCIENCE DIGEST taken from space by Apollo 11. The photo as published contains a white spot the magazine labels "an unidentified object." Sheaffer's investigation revealed that the original NASA photo and negative contained no such white spot.

The magician James Randi described results of a demonstration by alleged French psychic Jean-Pierre Girard ("the man who lifts objects with his mind") conducted under strictly controlled conditions set up by Randi. During 3½ hours of attempts, Girard failed to produce any effects whatsoever. Randi also pointed to the stacks of books promoting paranormal claims compared with the modest few that critique such claims.

An article entitled "What Do We Really Know About Psychic Phenomena" in the August READER'S DIGEST was called "a serious act of journalistic imbalance" that presents hearsay as fact and that reports various "successful"

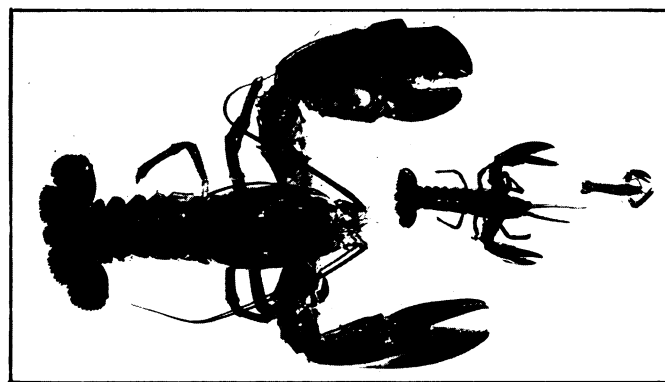
experiments "without acknowledging that virtually all . . . were subsequently proved to be inadequately controlled, inconclusive, and, in some cases, quite negative."

These critiques, analyses, and expressions of concern about media handling of claimed paranormal phenomena were presented last week in New York at a meeting and news conference called by the so-called Committee for the Scientific Investigation of Claims of the Paranormal. This is a self-appointed group of scientists, philosophers, science journalists, magicians and other investigators organized last year (SN: 5/29/76, p. 346). They are concerned about what they consider a flood of unevaluated claims about the paranormal put forward by proponents as facts.

The committee called upon the press and publishing industry to cooperate with the scientific community in providing "more responsible balanced treatment of claims of the paranormal" and urged educators to provide more instruction in the scientific method and in methods of critical thinking. "We are virtually overwhelmed by pseudoscientific, proparanormal propaganda."

Editorial reaction to the committee's plea has been mixed. The Washington Star chided the group for overseriousness and overkill: "It is classic gnat-killing by sledgehammer." The New York Times echoed most of the committee's concerns: "Science is not the be-all of existence, but its enemies can all too easily be the end-all." □

Lobster proportions dictate behavior



Young lobsters are better suited for a quick escape; older lobsters for a fight. These lobsters are 41, 17 and 7 centimeters long.

Fred Lang

Flight or fight? When a predator appears on the scene, choice of defense strategy had better be both rapid and wise. But animals don't always react in the same manner to the same threat. A lobster's response to attacking fish and octopuses shifts during its lifetime. When it is young, the animal generally chooses to tail flip out of a threatening situation. As it ages, it becomes more and more likely to stick around and put up its claws. Researchers at the Woods

Hole Marine Biological Laboratory now relate this changing strategy to the shape and workings of the lobster as it grows from a 14-millimeter juvenile to a 90-centimeter adult.

In the escape response, the tail flip, contraction of abdominal muscles propels the lobster backward. Its effectiveness depends on the speed with which a nerve signal is conducted from the brain and the relative size of the abdomen. Fred Lang and colleagues find that the