

First of the Paradoxs

TV network "idea man": "LW, I've got a hot one here. This bright, personable kid gets a masters degree from Berkeley in criminology — ya know, cops 'n robbers stuff. Then, he starts hearing other people's thoughts and having weird dreams that start coming true. . . . Follow so far?"

LW, network executive (somewhat preoccupied): "Yeh, yeh. Sure, sure."

Idea man: "Anyway, the guy decides to really get into this stuff, so he goes back to school, becomes the country's first 'doctor of ESP' and goes on to solve crimes with his fantastic abilities. We can work out the romantic angle later. . . . What say?"

LW (concerned): "Why don't you and the wife take a nice two weeks — no, better make it three — in Hawaii or somewhere, and I'm sure you'll be good as new."

With only a few embellishments, this fictitious "idea man" has described a real person — Jeffrey Mishlove is scheduled to receive the "first accredited doctoral degree in parapsychology from an American university," according to officials of John F. Kennedy University in Orinda, Calif., where Mishlove teaches courses dealing with parapsychology. The Ph.D. will come from the University of California at Berkeley, where Mishlove received his masters in criminology eight years ago.

It was Mishlove's "general interest in unusual behavior" that got him involved in criminology and eventually in parapsychology. "I was having psychic experiences myself," he says, "simple kinds of ESP, precognitive dreams, experiences that at the time seemed telepathic." This led to doctoral work in an individualized, interdisciplinary program. Mishlove's 600-page dissertation — entitled "Psi-Development Systems: A Disciplinary Matrix for History, Theory, Evaluation and Design" — evaluates various psychic training methods and abilities throughout history. He is currently designing courses at Kennedy U., which offers bachelors and masters degree programs in parapsychology, but is also interested in "applied parapsychology" in areas such as crime detection, archaeology, weather forecasting, medical diagnosis and business forecasting.

Kids' TV: ♀ yes; ♂ no

There have been numerous studies of the effects on children of television's portrayal of violence and other subjects, but comparatively little research has dealt with what attracts youngsters to TV in the first place. Now a study by Daniel R. Anderson of the University of Massachusetts suggests that children as young as two and a half years of age have their own specific ways of choosing television scenes they think they can understand and rejecting those they think they cannot.

Anderson and his colleagues have been studying how children watch and react to television. One of their main findings thus far has been that youngsters interpret sounds such as a woman's voice or a child's laughter as a signal that something comprehensible and concrete is about to be presented — so, the young viewers pay attention. Men's voices, however, appear to prelude adult-oriented or abstract topics not aimed at children and tend to be avoided. And natural animal scenes frequently consist of a series of unconnected shots of animals in their habitat, with little or no relation to the child, according to Anderson.

Youngsters first begin to understand TV images and sounds at two and a half to three years of age, he says. "We believe that young children learn a series of cues as part of the process of becoming active, selective TV viewers," Anderson says. "There is a highly active, complex transaction going on between the child, the TV and the people and objects in the surrounding environment."

Ironing out acid promoters

Leashing, or controlling, bacteria that promote formation of acid mine drainage is one way to stem the sulfuric-acid pollution threatening aquatic residents of streams in coal mining regions. The acid solutions form when pyrite — an iron compound sometimes known as fool's gold — is exposed to oxygen and water in mines. Two abundant bacteria operating in sequence, *Metallogenium* and *Thiobacilli ferrooxidans*, actually promote acid-producing pyrite oxidation, but they can be thwarted by elevating the iron content of mine water to 100 parts per million (ppm) from levels that can start as low as 0.5 ppm.

The bacteria are catalysts and responsible for about 80 percent of the acid produced in mine runoff, explains Fraser Walsh of ECO, Inc. in Cambridge, Mass. Walsh, who first identified *Metallogenium* in 1971, helped identify the iron regime that leashes the bacterium to halt the acid-making sequence.

One way to raise the iron level of mine water is to recycle acid mine water or mine tailings back into the mine. The scheme could halve the cost of treating acid mine water as required by state and federal law and could reduce the volume of waste water by a factor of 10. Walsh adds that the technique is applicable to wastes from zinc, iron and copper mines or any tailings involving sulfide compounds.

Federal council on radiation policy

President Jimmy Carter appointed Environmental Protection Agency Administrator Douglas M. Costle to head a Federal Radiation Policy Council that will involve 12 federal agencies. Created to establish a semblance of coordination between agencies with overlapping or confusing jurisdictions, the council will advise the President on legislation and recommend changes in current safety and monitoring programs. Among its responsibilities, the council will be expected to:

- review all actions by the Nuclear Regulatory Commission affecting worker safety and public health,
- review hazards posed by low-level radioactive wastes,
- determine the scope national radiation protection policy should assume in such problem areas as medical exposures, nuclear waste disposal and background radiation,
- and review monitoring and protection responsibilities of the EPA and other government agencies.

The World Herd and endangered birds

Zoos and wildlife conservation groups initiated the final phase of what they hope will prove to be a success story — reintroduction of the endangered Arabian oryx to its native habitat. Begun in 1963 with nine captured animals, the World Herd is now more than 150 strong. Spread in small herds throughout the United States, most of the creamy white desert antelopes were bred in captivity with the goal of eventually reestablishing herds in their native habitats.

Five of the animals raised at the San Diego Animal Park were flown "home" to a desert plateau in Oman earlier this month. The fenceless region they roam receives virtually no rainfall, only heavy fogs. But the creatures probably won't mind; they can go for months obtaining water from just vegetation and dew.

A more domestic program kicked off this week. In hopes of saving the whooping crane, bald eagle, Atlantic puffin and California condor, the National Audubon Society and Celanese Corp. joined forces to conduct research and captive breeding programs over the next four years. An international symposium, based on research developed in the program, will attempt to identify survival strategies for these and other endangered species.