

Using a test where subjects are shown pictures and asked to make up a story about each, he showed subjects pairs of pictures of people that were identical except for the presence or absence of an animal. To the subjects, the relationships between people portrayed generally appeared more positive when an animal was in the picture, and more positive characteristics such as intelligence, industriousness, and happiness, were ascribed to the people.

Another angle that draws attention of researchers is how animals yield clues to problems of their owners.

A researcher from Britain reported that cases of animal abuse may be used as an alert to family pathology. Interviews with families who were known to the Royal Society for the Prevention of Cruelty to Animals revealed many broken families and persons prone to violence and child abuse.

Although the field of animal-human relationships embraces matters ranging from ethics to "pooper scooper" laws, the chief application is in the therapeutic use of animals. One of the earliest pet-facilitated therapy projects was started in 1975 at the Lima, Ohio, State Hospital where a variety of animals, including macaws and gerbils, have reportedly led to improved morale and interaction among the patients. Although institutional regulations make it difficult to get animals together with institutionalized populations, the people at the meeting saw a big future for animals in nursing homes, hospitals, prisons, psychiatric wards, and schools where there are retarded, autistic, or handicapped children.

A French veterinarian, Ange Condoret, is planning to establish a children's center for animal-human communication. He believes animals can supply the bridge for autistic children eventually to establish contacts with other humans. He also says that childhood problems such as bed-wetting and nightmares can be alleviated by allowing a child to choose a pet.

Animals are also being used in psychotherapy. Boris M. Levinson, emeritus professor of psychology at Yeshiva University, said he met with a lukewarm reception when he reported on his use of a dog as co-therapist 20 years ago. "Until comparatively recently academicians have viewed interest in animal-human relationships as a childish preoccupation," he said. Now people are talking about doing systematic research on just what kinds of animals are best suited to the needs of particular populations. One speaker said he looked forward to the day when one could "prescribe a pet just

Reagan's Plan for Nuclear Power

With a minimum of fanfare, President Reagan and Energy Secretary James Edwards held a briefing at the White House on 8 October to set out their goals for rehabilitating the nuclear power industry. The statement, which held few surprises, described the federal commitment in general terms and gave no specific information about the legislation that will be necessary to achieve the new objectives.

The Administration's broad purpose, according to the President, is to create a stable and supportive federal policy to make it easier for utilities to raise capital for nuclear projects. The assumptions are that a growing economy must have electrical power, and that power can be supplied most efficiently by coal-fired and nuclear generators.

The three basic goals of the plan, according to the President, are (i) to accelerate the licensing of nuclear plants which have already been proposed, increasing the number of licensees by 50 percent in 30 months, (ii) to provide federal financing for research and development on the equipment required to sustain a system of breeder reactors, and (iii) to start operating a federal disposal site for highly radioactive nuclear wastes.

The most controversial item in the package is the decision to reverse the Carter Administration's ban on private reprocessing of used reactor fuel. Carter ordered the ban in 1977, closing the only functioning private plant in Barnwell, South Carolina. The decision was based on foreign policy. In order to prevent the spread of nuclear weapons technology, the Carter Administration sought an international moratorium on fuel reprocessing. As a gesture of good faith in negotiating the moratorium, the United States sacrificed its own reprocessing industry.

The Reagan Administration is repealing this policy essentially for domestic reasons. Reagan said he would like to create a private fuel-handling industry to help dispose of nuclear wastes. This would simplify the federal government's waste disposal problems. Asked about the impact this change would have on nonproliferation agreements, White House officials simply replied that the decision was a domestic, not a global, matter.

The President said that commercial reprocessing plants would be useful not only in disposing of wastes but also as a source of plutonium for the breeder reactor. Although this President does not approve of federal subsidies in general, one Administration official said the government may promise to buy a certain amount of plutonium from private reprocessing centers to help get them launched. It is not clear under this plan whether the government would buy plutonium just for breeders or for bombs as well. This is one of many controversial details the Administration will have to discuss in coming months.

Reagan's new program does not call for additional federal funding in the next year. (Congress has already debated and agreed to fund the breeder program.) However, the plan will eventually require additional legislation in at least two areas: plant licensing and waste disposal.

The Nuclear Regulatory Commission may make itself somewhat more efficient by administrative fiat. But to achieve the long-term objective of reducing licensing time from 14 to 8 years, the Administration will have to propose new laws. Nothing is on the drawing board at the moment.

The briefing paper also notes that, "The government accepts full responsibility for permanent isolation of high-level radioactive wastes." And it promises that the Administration will choose three permanent disposal sites and construct exploratory shafts by 1985. By 1988, according to this forecast, a federal disposal center should be ready for licensing. All of this will require new legislation, but as of now the Administration does not know what form it will take.

The House, still controlled by Democrats, is likely to be far less enthusiastic about this program than the Senate. At least one key representative has declared his strong opposition. This is why the parts of the program requiring new law will be slow to take shape.

—ELIOT MARSHALL