

Some Exciting Applications of Animal Behavior

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This last week we attended the annual meeting of the Animal Behavior Society held in Atlanta, Georgia. Over 300 scientific papers were presented, dealing with everything from the inheritance of “maleness” in flies to how hyenas choose their mates to the emotional lives of chimpanzees. Of all these exciting and interesting papers, the ones that attracted our attention were ones presented in a special session on the applications of learning theory to practical animal behavior problems. The talks demonstrated that even the most esoteric theories can have practical applications to pressing problems involving animals.

The session was kicked off by Dr. Kathryn Bayne, a laboratory animal specialist, who described how problem solving and reward training is being used with laboratory animals from mice to monkeys to reduce stress, enrich their lives and make working with them safer and easier for people. For example, she described how many laboratory animals are now given puzzle toys containing food to occupy their time and keep their minds busy. Such toys are similar to the ones given to companion dogs when they are left alone.

Next, Dr. Pamela Reid, a companion animal specialist, discussed the theory behind avoidance behavior, how it can arise from fear and aggression and how it can be treated in our pets. She pointed out that the treatments must be tailored to the specific problem, but that often, gradual non-threatening exposures to the fearsome stimulus can help. For puppies that hide when visitors come to the house, giving them brief, pleasant exposures to the visitors in the presence of food often makes a difference.

Dr. Fred Provenza, an animal scientist, talked about how livestock come to prefer the foods they eat and how learning, particularly early in life, can alter adult feeding preferences. Sheep can be taught to prefer certain plants as foods that they normally wouldn't eat, if they are exposed to them when youngsters. This may help to keep them healthy when other foods run low. Such preference learning can work in reverse as well, teaching livestock to avoid eating some plants that may be toxic or be fragile and important to the ecosystem.

In the final talk, Dr. Devra Kleiman, a zoo researcher, described how endangered golden lion tamarins (small South American primates) and black-footed ferrets (close relatives of weasels) that have been reared in captivity are trained prior to reintroduction into the wild. Normally these animals would learn, when young, how to hunt, avoid predators and find shelter. The captive-born animals have to be taught all these skills prior to being introduced into the wild.

What was clear from this session was that the science of animal behavior is being put to good use to help improve the lives and productivity of all kinds of wild and captive animals. For more information about the Animal Behavior Society, this meeting and some very interesting links, go to its website at www.animalbehavior.org.

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