

Readings and Case Studies

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Therapy and Change

Reading 17: Modifying Orangutan Behavior

Directions: Read the following selection, then answer the questions that follow.

Behavior modification techniques are widely used with humans to help change unwanted behaviors. Behavior modification techniques include classical conditioning and operant conditioning. One form of operant conditioning involves giving rewards for desired behavior. The reward encourages repetition of the behavior. Specialists at the Kansas City Zoo used special food rewards to gain the trust of a pregnant orangutan. By modifying her behavior, they were able to monitor the health of the fetus during its development.

...This is the story of the one-of-a-kind relationship between the baby's mother and the humans who take care of her.

During the last several years, zoologist Beth Moore and senior staff veterinarian Kirk Suedmeyer have worked countless hours to get the mother, named Jill, to trust them. In the end, using positive reinforcement, they trained her to do things that no other zoo in the world has been able to get an orangutan to do.

They got her to stick her arm into PVC pipe with a hole cut in the top so Suedmeyer could regularly draw blood. They had her urinate into a cup and hand it over for analysis. And, almost unbelievable, they trained her to waddle to the front of her cage, grab the bars over her head and allow Suedmeyer to rub gel on her swollen tummy for ultrasounds.

That allowed caretakers to monitor the health of the orangutan fetus like never before—a critical step, because Jill's last baby was stillborn.

Zoo Director Mark Wourms was thrilled. Not only did the accomplishment reflect well on the Kansas City Zoo, but it also provided researchers with "invaluable information about reproduction in an endangered species."

As long as anyone can remember, if zoo staff needed to draw blood or perform an ultrasound on orangutans or other great apes, they had to immobilize them first.

Orangutans are extremely strong—six to seven times stronger than humans. Getting close to them can be dangerous. That makes the prospect of giving them shots, drawing blood and rubbing ultrasound goo on their bellies all the more dicey.

So how did the Kansas City Zoo manage it? Suedmeyer just smiled.

"All you have to do is ask them," he said. "We just never asked them before." Why go to the time, trouble and expense of shooting them with a tranquilizer dart when you can earn their cooperation with positive reinforcement?

Enter the pudding and frozen raspberries. Orangutans love them. They also love gelatin, frozen blueberries and yogurt. You can see it in their faces as they lift their heads and pucker their lips—the universal orangutan symbol for "more."

With time, training and big spoonfuls of treats, Suedmeyer and Moore learned orangutans would do almost anything.

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The program of behavior modification—called operant conditioning—began almost seven years ago with another orangutan. It started with changing the animal's feelings about the vet.

"Before," Suedmeyer said, "every time I would come up, it was a bad thing."

Then he changed his approach. He decided to come to the bars and just sit. No tranquilizer gun. No nothing, he just sat.

Eventually, through training, the animal learned that if he came close to Suedmeyer, he would be rewarded—with pudding, raspberries or something else.

They trained Jill the same way.

Come here, get a treat. Put your arm through the pipe, get a treat. Let them stick you with a needle and get a really, really big treat.

Since zoo staff members knew they would need to see the infant orangutan, Moore even used positive reinforcement to train Jill to show her the baby.

They practiced with a stuffed orangutan.

"We started with her touching the baby outside bars," Moore said.

"Eventually we gave her the little stuffed animal inside the bars. And we were teaching her things, like to hold it up in case we needed to give it a bottle.

"But when she had her own baby, I thought: 'Oh my gosh. There's just no way she's going to let us see it.'"

But Jill surprised Moore by showing her the baby, named Pendamai, an Indonesian word meaning "peacemaker."

"She came up to the bars, and I told her it was really a beautiful baby," Moore said. "I said, 'Gosh, Jill you did such a beautiful job.' And I said, 'Can I see your baby?'" And she just sort of leaned forward and let us look at the baby.

Zoo spokeswoman Denise Rendina saw the whole thing.

"That animal absolutely presented the baby for Beth to see," she said. "I was just like, 'That is just the sweetest thing I have ever seen.' It was phenomenal."

Whether you want an animal to show you her baby or let you give her a shot, the key is patience, trust, training and rewards.

Orangutans can't reason like humans, Suedmeyer said. But they can make a simple cost-benefit decision.

"It's like: 'Yeah, that's going to hurt. But it won't hurt that badly, and I really like those raspberries.'"

—Zoo Staff Wins Ape Mom's Trust

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Understanding the Reading

Directions: Answer the following questions in the space provided.

1. **Identifying** Identify three things Jill, the orangutan, was taught to do.

2. **Stating** What rewards did the zoologist and veterinarian use to modify Jill's behavior?

3. **Explaining** How did the behavior modification help them monitor the health of the fetus?

4. **Analyzing** Why had Jill learned to dislike the veterinarian?

5. **Explaining** Once the baby was born, how did the behavior modification help the veterinarians monitor the baby's health?

Thinking Critically

Directions: Answer the following questions on a separate sheet of paper.

6. **Summarizing** How did the zoologist and veterinarian use systematic desensitization to accomplish their goals?

7. **Comparing and Contrasting** What similarities and differences exist between behavior modification in humans and in animals?

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