

Advanced Chicken Training Camp

Sophia Yin, DVM

HOT SPRINGS ARKANSAS, AUGUST 2000

I went through the picture in my head. Chicken number one climbs up the ladder, onto a one foot wide platform, makes a 180° turn and tightropes across a narrow bridge to a second platform where it pecks a tethered ping pong ball sending the ball in an arc around its post. The chicken then turns 180° and negotiates a second ladder back down to ground level where it encounters a yellow bowling pin and a blue bowling pin in random arrangement. It knocks the yellow one down first and then the blue one.

Chicken number two grasps a loop tied to a bread pan and with one continuous pull drags the pan two feet. Then, in a separate segment, it pecks a vertical one-centimeter black dot on cue and only on cue three times in 15 seconds. The cue is a red laser dot.

Scenes from a Saturday morning cartoon? A twisted scheme of some sort? Neither of the above. It's the assigned mission at the August 2000 Advanced Operant Conditioning Workshop (a.k.a. chicken training camp), taught by Bob Bailey and psychologist, Marian Breland-Bailey. Nine animal trainers from the U.S. and Canada, including myself, are here to meet the challenge. We have five days.

The task sounds impossible but each on a personal question to learn the intricacies of operant conditioning.

Says Marian Bailey, "Animals are learning all the time, not just during training sessions. And they're learning with the same principles. Operant conditioning is the way that behavior changes in the real world."

As experienced trainers, we know this. We hope that with a better grasp of the principles of operant conditioning, we can catapult ourselves to a new level of training. The nine of us form a diverse group. Some train animals professionally for theater or advertising, some have competed avidly in canine obedience trials or have been dog training instructors for years, and others just enjoy training their own assortment of pets. Despite our varied backgrounds, we all envision the myriad of benefits these five days will bring forth. When we're finished we'll return home to train our clients' animals more efficiently, to accomplish more with our own pets, and to instruct our students more proficiently.

For Marie Gulliford, who's trained everything from cockatoos to pigs, horses and cows, one of the greatest benefits will be in her grooming shop. "I train the dogs who come in for grooming for my own benefit. My grooming shop is a business for profit. It's much more profitable if you can groom the dog quickly and it's easier to do that on a dog that behaves well than on one that's doing all sorts of extraneous behaviors such as jumping off the table or biting you."

It's no accident that we've chosen this particular training camp to help us fulfill our training goals. Sue Ailsby, a retired obedience and conformation judge who's been training dogs for 38 years expresses the group sentiment, "This course offers an absolutely unique blend of scientific facts and practical applications thereof." Ailsby, who's trained dogs for every legitimate dog sport and competed in most of them and who's also trained a number of service dogs including her own, frequently lectures at training,

handling, and conformation seminars. With her years of experience, she's chosen to train here because, "The Bailey's do it better, they do it faster, and do it with a deeper background."

Between the two of them Marian and Bob represent have trained over 140 species of animals which is impressive in its own right. However, their contributions, especially Marian's, to the field of animal training extend well beyond numbers. Marian and first husband, Keller Breland were at the forefront of operant conditioning when it was a relatively new area of study. They were among BF Skinner's first graduate students in the early 1940s. In an odd twist of fate, their studies were interrupted by World War II when Skinner took a hiatus from his university research and instead worked for the U.S. Navy on a project training pigeons to guide missiles. He enlisted Marian and Keller to help and it was during this project that the two gained invaluable practical experience with the most advanced principles of operant conditioning-aspects they'd read about in their studies but never seen in action.

Surprisingly, it was the simpler principles that convinced them to make animal training a career. Principles such as behavior shaping whereby you start with a simple behavior that the animal readily offers and gradually reinforce behaviors that look more and more like your goal behavior.

"Skinner had a push button in his hand and had the electronic feeder outside of the training box," says Marian, recalling an incident during the pigeon bomb guidance project. "At one point he took one of the pigeons outside of its training box and worked on shaping its response because for some reason the pigeon was not pecking it's target. So Skinner demonstrated the shaping process. It was then that Keller and I realized how powerful this system was. And we were very excited about it. We decided that after the war we would get into something where we could apply this."

Since neither had gone on to get a clinical degree they knew they couldn't get into the treatment of people using this technique. But since they both liked animals and were familiar with different kinds of animals, they decided to go into the animal business. They started Animal Behavior Enterprises (ABE), a company who's goal was to demonstrate a better, scientific way of training animals in a humane manner using positive reinforcement. They started with dogs, thinking that with so many untrained dogs in the U.S. that they'd just show their new humane way of training and people would be coming in by he thousands. Says Marian, "We thought it would be a cinch." Well the training part was, but unfortunately, the idea was too advanced for its time. Trainers shunned the new method claiming that people had been training dogs for centuries already.

Undaunted by this obstacle, Marian and Keller instead headed in a different direction. For 47 years, ABE mass produced trained animals for their own shows and for animal shows across the country. At their height they were training about 1000 animals at a given time for companies such as General Mills. They also worked on animal behavior research and training projects for groups such as the U.S. Navy and Purina, as well as Marineland of Florida and Parrot Jungle where among other things, they developed the first of the now traditional dolphin shows and parrot shows. Through it all, they kept rigorous data on all of the training session and published several landmark papers in respectable scientific journals.

Psychologists, animal trainers, and behaviorist came to Hot Springs from all over the world to visit Marian and Keller. They trained many animal trainers who later moved on to other places, including Busch gardens and Sea World. Marian participated in the spread of the newest methods of humane animal training.

During their time together before Keller passed away in 1965, they not only founded the field of applied animal psychology but they also added many other impressive firsts, including: the first commercial enterprise (ABE) using operant conditioning ('43); the first school for teaching applied operant conditioning, including the first instruction manual ('47-48); first dolphin and bird shows using operant conditioning ('55); first automated commercial animal training facility ('51); first automated (coin-operated) animal show ('53); longest running TV commercial (Buck Bunny, '54 - ran 20 yrs). Their animals performed at virtually every large county and state fair in the nation.

But of all these accomplishments, one stands out the most to Marian. "One contribution was to give the science of behavior to animal trainers," says Marian. "To encourage the use of operant conditioning behavior analysis in many fields of animal work-in medical behaviors for animals, husbandry behaviors, show behaviors. Just a large number of fields have taken up the operant methods and have used them quite successfully. We've been quite gratified by this."

In fact the methods have become so ubiquitous that trainers have forgotten where the methods originated. Says Bob Bailey, "There's one area that I think has been overlooked for a long time and that is that it was the Brelands, even beyond Skinner and the other psychologists who realized the significance and widespread application of the bridging stimulus. That it would be a revolution in animal training. They recognized it as absolutely key to the widespread training and this was back in 1943."

And they were right. The bridging stimulus, usually a whistle or a click from a toy clicker, is now used in virtually all marine mammal shows and in training of zoo animals for husbandry behaviors. And, over 40 years after the Brelands first introduced it for use in dogs, it's finally taken off in the dog training world in the form of clicker training. We use clicker training with the chickens too and though all of us have clicker trained extensively before, the chicken proves a particularly educating choice.

For one, chickens are so quick that our timing has to be right on. The timing required to train the average dog won't hack it with chickens. A fraction of a second off and you get a chicken that pecks near the black dot but not on it, that shakes the loop attached to the bread pan rather than pulling it, and that looks at the bowling pin instead of pecking it. Secondly, chickens are particularly skillful at telling us that we need to up the rate of reinforcement. Failure to do so and our flappy fowl's running around on the floor in search of food instead of up on the training table learning her tasks.

And third, because chickens peck so quickly we get more repetitions in the short amount of time. That means we have more chances to recover from our training blunders. Yes, even though we're in the advanced class, we still make our share of mistakes. The difference is that now we know within several five-minute sessions when we've made a mistake because like researchers we take copious notes. Every session we note the chicken's performance as well as our reinforcement errors.

It's an uphill battle for us, but we're determined to get the most out of it. And we do. On day five, after a total of 60-90 minutes of training per chicken per day, we've done it. It's a room full of poultry performing on cue like pros. Up the ladder, turn 180°, across the bridge, peck the ping pong ball, turn 180°, down the ladder and then whap! whap! First the yellow bowling pin, then the blue. Click! Treat! Whala! A flock of trained chickens and nine happy trainers.

Dr. Sophia Yin, a 1993 graduate of the UC Davis School of Veterinary Medicine, is the award-winning pet columnist for the San Francisco Chronicle and the author of *The Small Animal Veterinary Nerdbook®*, a best-selling text book for veterinary students. She earned her Master's in Animal Science in 2001 from UC Davis where she studied vocal communication in dogs and worked with behavior modification in horses, giraffes, ostriches, and chickens. She currently teaches three upper division undergraduate courses in domestic animal behavior in the UC Davis Animal Science Department and supervises students in various animal training and behavior research projects. She is on the professional advisory board for Pals2Pets, a non-profit organization dedicated to teaching children to understand and train their pets through afterschool programs, television programming, human-interest specials, and family movies. Dr. Yin also sees animal behavior housecalls and lectures at various veterinary behavior symposia and animal training conferences across the country. For more information about Sophia, on how to forge your own path in animal behavior, or on animal behavior in general, visit her web site at www.nerdbook.com/sophia.