

CHANGING THE WORLD, ONE CLICK AT A TIME, PART I

A master-class clicker training adventure

In the fall of 1998, a dog trainer in my Boston neighborhood, Mary Ann Callahan, approached me about giving a clicker training class for serious trainers like herself. The class would be based on my book *Don't Shoot the Dog*, a text on the scientific principles underlying operant conditioning with positive reinforcement, or clicker training. Despite its title, the book is not just about dogs, but about all kinds of applications of positive reinforcement, but many dog trainers find it fundamental to their work.

I had been teaching occasional two-day seminars to large groups of dog trainers, but I had never really taught a continuing clicker class with the same students week after week. I accepted Mary Ann's proposal and asked for a group of eight participants who were already familiar with clicker training using the method in their own competing or teaching. Mary Ann found the participants by word of mouth and organized the schedule. Originally I planned to run the class for six weeks. Somehow it got so interesting that we stayed together for nearly a year.

Clicking on Time

Instead of tackling training tasks one behavior at a time, as is customary in dog training classes, I decided to address specific clicker training

skills, or fluencies. For example, did everyone understand how to click at the right instant? The click is a marker signal. The click promises a reward to come, of food or petting and praise, and it also identifies the behavior that earned the benefit; this is its most important function. To work as a marker signal the click needs to 'fire' exactly when the dog is doing what you like: while the behavior is happening, not after the behavior is over (which is when one gives praise or treats).

An exercise in 'hind-end awareness,' based on the teachings of Linda Tellington-Jones, proved to be a great way to sharpen the trainer's timing skills.



We spread out a lot of objects to use as low obstacles: a ladder lying flat, a vacuum cleaner, a coil of rope, a few boxes. Then we led each dog across each object. The trainer's task was to click exactly when the hind feet crossed the obstacle, but ONLY if they crossed without touching it. If the dog was a little clumsy, the trainer

might have to click just for one foot at a time, training the left and the right hind legs in separate tries.

In a few tries we could all see the vast difference between clicking and then rewarding a good performance after it happened, even if only half a second *after* completion, and clicking *during* the crucial behavior, and then giving the treat. Dogs that were clicked and rewarded after completion were eager to try again, but kept on making mistakes. Even though they got the same praise and treats on the other side, the dogs that were clicked *while* their back legs were moving over the obstacle did much better. They quickly learned, often in two or three clicked trials, to step carefully through and over things, instead of just stumbling or crashing along any old way. This exercise made the dogs much more attentive to their own actions, a nice skill for the dogs. It also made the clicker-wielders much more attentive to the timing of the click, a nice skill for trainers.



Team training

Another necessary skill for clicker trainers is planning a shaping session: figuring out how to break a behavior down into many small steps, and then training it step by step. Traditional trainers often try to ‘go for the whole picture’ from the beginning. But if the dog doesn’t do the whole behavior right, you have nothing to reinforce. People tend to get stuck here, or to fall back on correction to try to build the behavior. I used team training to break up this logjam.

I started by having each person show us a behavior they were having trouble with at present. (Maybe the dog was giving good ‘fronts’ but too far from the trainer; or dropping the dumbbell; or missing a weave pole; or rolling over only halfway and then rolling back.). Then we divided up in pairs: two trainers, two dogs. Each team crated, tethered, or downed one dog. Then the person without a dog clicked the other person’s dog through whatever behavior the owner wanted to work on, while the owner handled the dog and gave out the treats. The teams had ten minutes to train the first dog. Then they changed places and worked with the other one.

A partner fresh on the scene can often see new ways to break down the behavior that’s perplexing you into smaller steps, and that’s what happened

with our teams. Having the owner do the handling and feeding made the situation familiar for the dog, so the dogs cooperated calmly. Soon each dog showed a better understanding of what was expected: Fronts have to be close to the owner to earn a click; rolling all the way over is the winning thing to do. The improvement was sometimes stupendous, and the human members of the class often reinforced each other with cheers, laughter, and applause. It was fun for the participants, the spectators, and of course the dogs.

Latencies

Often a dog understands what is wanted, but takes a long time to do it. This is what behavioral scientists call 'a long latency.'

Latency is the time that passes between giving the cue ('Down') and the dog actually getting to the floor. Good trainers aim for 'zero latency,' i.e. the dog is in motion before the hand signal is completed or the words are out of your mouth.

You can build short latencies with the clicker, by selectively clicking for faster responses. Begin by asking for several repetitions of the behavior. Click and treat every response, so the dog becomes enthusiastic about the task. Then ask for several responses again, but only click about half of the responses—the quicker ones. Jackpot—give an unusually big reward—for any truly quick response. By this method, that leisurely, oh-my-aching-back 'down' can turn into an instant belly-flop down in less than five minutes. We worked on fast responses on lots of behaviors: fast sits, fast recalls, and instant downs, including down at a distance or in



mid-stride. If you make quick response a non-negotiable criterion for everything you click, dogs and trainers both start getting pretty speedy.

Real-world benefits

As the classes progressed, we all found that each new thing we and our dogs learned proved to be useful in unforeseen ways. No matter what kind of work the dogs were being asked to do at home, we were seeing improvement, sometimes with no specific training effort at all. The class participants participated in a wide variety of canine sports, including obedience and agility competitions, herding, tracking, carting, and the conformation show ring. For dogs being trained for the breed show ring, for example, hind-end awareness, developed by clicking for crossing little obstacles without touching them, turned out to be very beneficial in training the tail set. Dogs often don't know they have tails, and at first can't control them consciously. If you click a dog for holding the tail higher, its first conscious efforts to move the tail result in wags, not lifts! Going through the Tellington-Jones exercise made the dogs of where their tails were, which made it much easier to teach a dog to carry the tail correctly (either higher or lower, as required by its particular breed). Being aware of back foot placement also facilitated training the self-stack; and the habit of training for 'zero latency' resulted in quick response to any and all cues. As we continued, over the next months, we were to find many more practical applications of our experimental work, described in the next two chapters.

CHANGING THE WORLD, ONE CLICK AT A TIME, PART 2

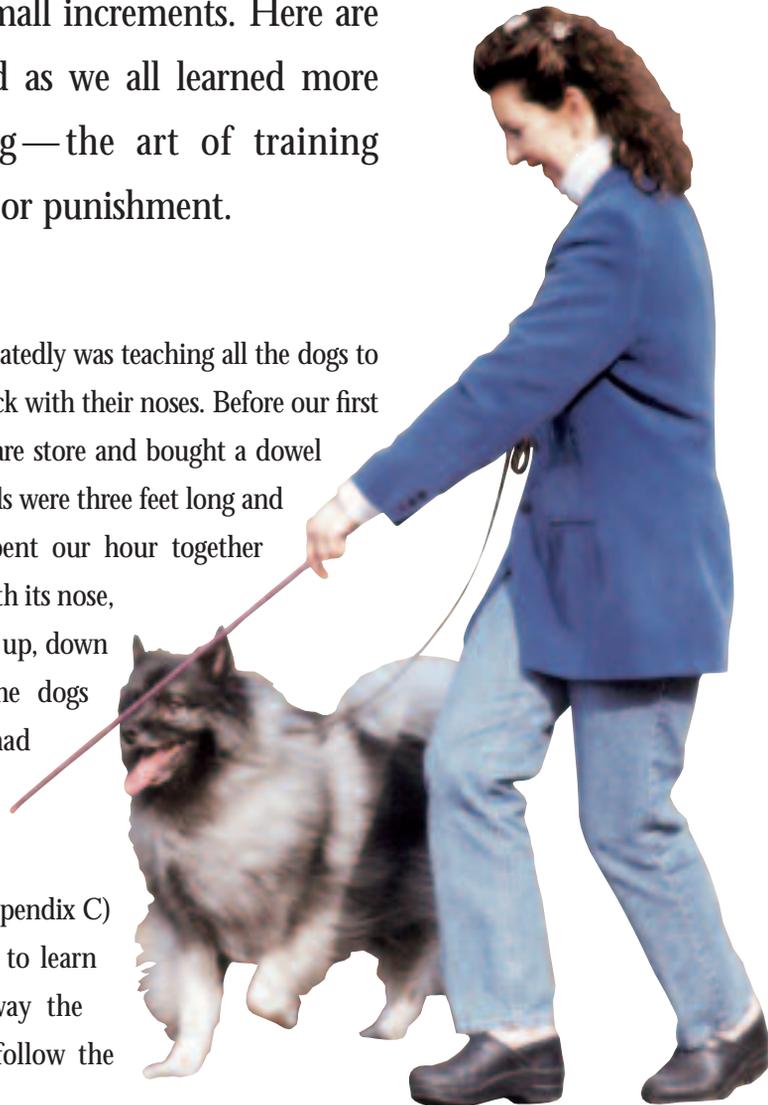
Inventive clicker training can lead to success in many training areas

Each week with my master clicker training class was a new adventure in shaping behavior, in building it step-by-step, in small increments. Here are more of the exercises we did as we all learned more about operant conditioning—the art of training behavior without using force or punishment.

Targeting

One of the exercises we worked on repeatedly was teaching all the dogs to target (touch and follow) the tip of a stick with their noses. Before our first targeting session, I stopped at a hardware store and bought a dowel for each member of the class. The dowels were three feet long and about a half-inch in diameter. We spent our hour together teaching each dog to touch the stick with its nose, then to follow it to the left, to the right, up, down and forward. Some owners and some dogs caught on immediately, while others had to try several approaches before they got it right.

Target training (outlined in detail in Appendix C) is a great behavior to try if you want to learn clicker training. First, there is no way the trainer can make the dog touch or follow the



stick: the behavior only happens if the dog does it voluntarily. Second, this exercise is one in which you can easily see how the behavior is “shaped,” starting with tiny movements of an inch or so, and gradually building up until the dog is following the stick for long distances.

It is amazing how dogs know which click is meant for them, no matter how many people are in the same room, clicking more or less simultaneously.

“Pass” the Dog

For this exercise, we divided the group into pairs of trainers. Using our target sticks, we tried “passing” each dog from one person’s target stick to the other person’s and back again. Once the dogs caught on, each team could do figure eights. The dog would circle one person, then pass to the next target stick and circle the other person in the other direction.

The next exercise we worked on was passing the dogs down a line of three or four people, having them weave in and out as they went. It turned out that every person had a distinctly personal shaping style. What you clicked was what you got. (It is amazing how dogs know which click is meant for them, no matter how many people are in the same room, clicking more or less simultaneously.) If you were in a line, you had to shape your section of the passage, building reliability and duration, just as if you were the only one working the dog.

For us humans, this was a *big* lesson in thinking on our feet and monitoring our own shaping techniques. Suppose a particular dog always wanders away from your target, but it sticks like glue to the targets of the people on each side of you? You know right away that it isn’t the dog’s fault, and it isn’t chance or bad luck; you have done something incorrectly, probably involving the timing of your clicking.

It happened to me. One student, Dee, was working a brilliant little Border Collie, Nepe, a herding champion despite her tiny size. Nepe followed my stick twice, even though I did not click, and then left me flat on the third pass. “Hey, twice with no clicks? Forget it.”

“Oops,” I said to myself. “Because this dog is so smart, I figured I didn’t have to reinforce it! I was wrong!” This sort of thing happened to most of us at some point, and we learned to think fast and fix the problem in a couple of clicks so the game could go on.

We probably spent no more than three twenty-minute sessions on this exercise, over the course of two or three classes. But many dogs ended up being able to weave down and back a six-person line in order to receive one treat at the end. And none of us worked on it at home.

Left- and Right-Directed Go-Outs

When quick responses, fast clicks and an understanding of how to shape behavior in increments were well-established, we could try some tougher problems. We decided to try to shape the behavior of going away from the trainer, not just straight ahead but also on angles in an indicated direction. Each person had twenty minutes in which to shape his or her dog to go away from the trainer at a 45-degree angle to the left or the right. I gave no suggestions or instructions about how to do this.

Almost every dog-human pair got at least one direction down pat in their twenty allotted minutes. What was interesting, however, was that every trainer came up with a different way of doing it. The final show-and-tell was less about what the members of the class had accomplished than it was about how they had arrived at that behavior. By tossing a lure? Working against the wall or in a corner? Cold-shaping, paw by paw, step by step? Using a chair as a go-around obstacle? Targeting to two objects on the floor? Using a human partner? Or two? And when did you click? This last was as important a question as how one had shaped the result.

Tricks

Homework was not usually a part of the class. I wanted people to learn more shaping skills, but I wasn't interested in monitoring or reinforcing specific achievements or performance. I did not want to impose duties of any sort or keep track of assignments. I was also anxious to avoid creating any kinds of competitive feelings in the class.

We did, however, have "trick challenges." Anyone could bring in a new trick, and everyone who wanted to try had a week in which to train it. Israel trained his big, sweet-natured Doberman, Knight, to fake a snarl



on the cue “Say Grr.” Dee developed a great cue; whenever she sneezed, her Border collie Nepe pulled a Kleenex out of the box and brought it to her. Inspired by this, several of us tried to get a dog to sneeze on cue (so another dog could bring it a Kleenex); that turned out to be much more difficult!

Benefits Outside of Class

Along the way, we began to see results outside of class. Kevy, the Irish Terrier, qualified in agility for the first time. Nicky, a Keeshond, got his CD. Tucker, a beautiful and very laid-back Bernese Mountain Dog, passed his carting tests. Benny, a belligerent Golden Retriever, who at first openly displayed an intense desire to attack any other dog that walked by or even looked in his direction, became serene enough to attend and compete in obedience trials, and earn his first titles. He was a transformed dog, according to those who “knew him when.”

Did we specifically work on Benny’s aggression? Not as a rule, although in one class, toward the end, we asked all the dogs to jump over other dogs, and also to lie down while other dogs jumped over them. That exercise was especially good for the naturally pugnacious terriers in the

class, and for Benny, whose aggression came from fear. It was no trouble at all for the benign Bernese mountain dog, Tucker, who couldn't care less how many dogs jumped over him.

In fact I was seeing new confidence in all the trainers and all the dogs. Perhaps the clicker training process brings humans and animals alike a new view of life: as an ongoing opportunity for making good things happen, instead of as a threatening world in which one must constantly strive to prevent bad things from happening. In the months and years that followed, several class members took their day jobs into totally new directions, or expanded their dog training skills into careers. Inventive clicker training seemed to be leading to success in many areas, not just in the ring.



CHANGING THE WORLD, ONE CLICK AT A TIME, PART 3

Cues as clicks, and the final results

As our master class wrapped up many months of exploratory clicker training, we tried a final exercise that any dog owner might find interesting to do with their own dog.

In the first part of the exercise, I asked everyone to pick a short, simple behavior that his or her dog loved to do and that was under good cue control. Sandy, for example, had gotten rid of her border collie's excessive barking by bringing it under stimulus control. Now her dog, Jolie, was silent, unless she heard that wonderful cue, "Bark," which gave her the opportunity to get a reward for what she most loved to do; so for the purposes of this exercise Sandy's choice was the behavior of barking.

Some of the other choices made by members of the class included a spin, a high-five, a recall and a bow; anything quick and easy that the dog did very reliably on cue. Each person then demonstrated for the class that the dog understood the chosen behavior well and did it with gusto.

We then set up various obstacles that people had brought in for the class. Some were borrowed from agility training and some we came up with on our own. I asked the members of the class to choose an obstacle their dog had never encountered before. I specifically told them to choose something the dog might find a little bit daunting, for example, pushing through a curtain that the dog could not see past, standing on a wobble board, or jumping through a smallish tire.

Each member of the class used a clicker to shape their dog's navigation of the chosen obstacle, while I walked around and watched. I was waiting for the point at which each dog had the idea and was beginning to do the new task although hesitantly. All eight dogs reached this stage in about 10 minutes.

Then I stopped everybody and told them, "From now on, as soon as you get an approximation of the behavior—two or three paws on the wobble board, say—instead of clicking, please give that favorite cue which your dog loves. Then let that familiar behavior happen, then click and treat that behavior." One by one, the trainers each used their dog's favorite cue as the marker signal for trying the difficult task. In other words, the cue word was to function as a click, a signal that identifies to the dog that the behavior it is performing at that moment is



the behavior the trainer desires. The cue also promises that a reward is coming. As each dog tackled its obstacle, it heard the cue, responded with the bark, spin or other familiar behavior that it loved to do, and then got clicked and treated. Suddenly I was hearing cries of amazement all over the room. After two or three repetitions of this sequence, each dog was doing the scary, previously resisted behavior perfectly, and with gusto.

What was happening? At least three factors were at work. We had built a behavior chain, ending up with a well-learned behavior, so the chain itself was reinforcing. Also, because the known, cued behavior was a favorite, we were using the Premack Principle. (David Premack, a psychologist who works with primates, was the first person to write about the effectiveness of using a preferred behavior as a reward for the performance of a disliked behavior.)

Most important, we were using a favorite cue both to identify *and* to reinforce the new, more difficult behavior. It was a cue *and* a click, melded into one. Each dog got two rewards: the chance to do the behavior it loved, and a treat. What especially surprised everyone was how quickly the dogs learned to do the scary thing to get the good cue. The old cue was actually more powerful than a simple click and treat.

The timing of the cue/click had to be perfect. Sandy had to give the bark cue to her Border collie at the instant her dog lifted its fourth paw onto the wobble board, exactly as she would have timed a click. But then—what power! Wobble boards lost their terror for the dog on the spot. Instead the task represented a great new way to make Sandy give the bark cue. It was a fabulous new tool.

The class members had now experienced the process personally, not only by doing the training, but by experiencing the thrill of their dogs' successes and their own astonishment at the disappearance of fear and reluctance. Perhaps because of the emotional as well as the intellectual experience they had just had, it was a tool they now could really understand and apply. The trainers plunged into an excited discussion of what they could do in other training situations using this new "super click."



Every dog was doing things it never had done before.

The Final Results

On the last evening of the master class each trainer made use of the chance to repeat the intriguing “cues as clicks” exercises with a new obstacle. Every dog was doing things it never had done before. The golden retriever moved backward through a curtain, the poodle stood happily on the wobble board, and the Irish terrier learned to score soccer goals with its front legs. All the owners were beaming at their dogs, and every dog was beaming back. Our class had become a weekly hour of sheer, fascinating joy for every living being present.

But what did we truly accomplish? I remember one evening when we were in the middle of trying out some new challenge, I stopped and made a confession: “You know, I don’t really know what we’re doing here.”

Class member Israel Meir instantly answered, “Changing the world, one click at a time.” So we were. And so can you! Click!