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“Why train that behavior?”

Why?

We are all training our animals and maintaining behavior every day if we are lucky. We go through the routine of behaviors we have trained previously and reinforce with some variety in reinforcers. A good session is a session where the animal stayed with you the whole time and performed all the behaviors well.

Why are we training the birds for shows and our bear in this exhibit? Dr. Susan Friedman, Ph.D., asked me that very question. Usually I get so caught up in the rush of a good session or show that I don't think about it but on the way home it often comes to mind. It is a question I think everybody should ask themselves when training animals and every day. Why am I training this crocodile to shift off exhibit? Why am I training this bird to fly to my glove out of this Ferris wheel? The heart of the matter is, how does training benefit the animal?

What does training look like from the animal's perspective? Is it part of the daily routine only to be checked off our Must Do list? Or, is it unexpected, challenging, interesting, and different every time? As keepers we are also trainers who are responsible for our animals' behavioral and emotional health, in addition to their physical health. If we go through the same exact routine every day with the same behaviors, what is the benefit to the animal?

How many times have we read training records that state, “Knows an injection behavior,” yet when it comes time for the vet to give the injection the animal does not perform the behavior? There is a disconnect between why we train, how we train and, therefore, what the final behavior looks like. It takes a keen team of trainers to maintain a training program that produces reliable behavior in a diverse environment under varying conditions.

For the Animals

I think we can all agree that in the end we all train for the animals' benefit first. We want each animal to have the opportunity to use its senses and adaptations to make decisions every day and experience the consequences of those decisions. The highest standard of care is one in which animals are active participants in their daily routines and flexible, bold individuals in the face of novel, even stressful, situations.

Have a Plan

We want to make sure that before we start training we have a detailed plan and not train from the hip, willy-nilly. This is one meaning of the idea “respecting animals”. In the plan we want to describe the behavior we would like to train and what the benefit would be to the animal, for example veterinary or enrichment. Visitor education and experiences are good reasons to train too. Also include the different conditions in which the behavior will need to be generalized - people, places, times of day, etc. This could be part of a training plan.

Husbandry and Veterinary Behaviors

Husbandry is a big issue in zoos. Training husbandry behaviors allows animals to participate in their own care, which also allows keepers to do their job better, such as shifting on and off exhibit for cleaning. Husbandry behaviors might be the same every day and probably at the same time in the same place and often for the same reinforcer. If there is any way to make this behavior more unpredictable, to add a bit of surprise or novelty for the animal, you may see an increase in the strength of this behavior.

We might also train our animals to participate in veterinary procedures to assist the animals and the doctors. These include a wide variety of behaviors from holding a relaxed position for trimming nails to blood draws. These are difficult behaviors to teach because there are many variables to consider. It is not enough to train the polar bear to present his ear for a temperature reading, you will also have to train it to hold the behavior for some duration and under different circumstances (people, times, areas).

Once these behaviors are trained they must also be maintained over time and conditions. This is the challenge of maintenance and generalization.

There are many facilities around the world that go through the same routine every day. The gorilla sits in front of the mesh and responds to the cue to touch shoulder, ear, foot, other foot, hand, other hand, after which it hears “Gooooood.” Here’s the perfect situation to ask, “Why are we maintaining these behaviors with this animal?” Our intention is for the health of the animal, so we can check for cuts and bruises, take its temperature and give it an injection. But, when the time really comes that the animal needs an injection or its hand medicated, how many animals still hold up their hand or take a slow injection in the shoulder? People have trained the behavior up to a point and then have forgotten to continue to the end point, well generalized with solid duration. It’s a case of moving through the motions but not achieving a real functional behavior in the long run.

Enrichment

Every day we have many decisions to make and we experience the consequences of those decisions, which acts as feedback about how to behave in the future.

Our environment is highly diverse. We decide whether to work 5 days a week or call in sick. We go to the bar on our weekend, have a great time or stay home and read a book. We are all individuals that have different reinforcers for behavior but we have many choices on a daily basis. That is what we should aim for in our animals in the zoo. How can we change their days? Ten years ago we fed our animals in the same dish at the same time the same food in the same spot. Now we at least use some of that food to train the animal, or stuff it in a box but it is the same behavior, at the same time, in the same order.

If we truly want to arrange training under the enrichment bracket we should look at how much stimulus diversity we are really offering during a training session. Going back to the gorilla example above (quick touch of arm, head, leg, other leg, etc.) there is nothing new in the session - day after day it is always the same. The animal is doing something, but it's nothing important for the animal (or the keeper). Without decisions, the opportunity for enrichment is lost. Like Dr. Susan Friedman, Ph.D., said to me not long ago, "Ten years ago we bored animals to death with nothing to do; now we bore animals to death with nothing *important* to do."

For the Visitors

For shows we ask, "Why are we training this marabou stork to fly from this point to the next or training this trumpeter hornbill to fly high to catch a grape tossed in the air by a child?" For zoos we ask, "Why are we training this lion to go station on this rock for 2 minutes?"

In my opinion the best thing an animal can do is exhibit its wild behavior and make decisions every time we train. For that trumpeter hornbill, we want to offer the choice every day to load into the crate or not, to come out to catch the grape or not, to use her senses and adaptations to maneuver in the wind to catch a grape that gets thrown differently every time and find out what kind of consequences she gets for performing that behavior. This opportunity increases the animal's welfare and allows us to show people how cool these birds are and inspire them to take better care of the natural world. We have many opportunities in a day where we can inspire the next conservation champions. These are important moments where we can change peoples' opinions about their planet and inspire them to care by taking better care. Also, when visitors see the husbandry and veterinary behaviors animals can do, they see the lengths we go to, to take care of these animals.

Maintaining Behavior

The category of maintaining behavior is one that is relevant to all of the headings in this paper. Maintaining a behavior and training a behavior are very closely related. Behavior is never the same so we are always training but when you are not looking for any more approximations and continue to hold the same criteria then you are at the maintaining behavior stage of training. This is usually after the trainer has decided that the behavior is complete. It is very important that all

trainers know the criteria of the behavior and that all trainers will maintain the same level of the behavior.

The decision to call the behavior trained is a big decision to make. When we are training a behavior the animal is getting reinforced for variety in the behavior, approximations to the end behavior get reinforced. When the behavior gets labeled *done* or trained we focus on the end behavior and stop reinforcing variability. The animal will be held to one criterion for reinforcement. There is nothing wrong with that but you want to be sure the behavior is done. Like we said earlier, when training the behavior we rely on the animal offering us a variety in behavior. If we stop reinforcing the variety and focus on one level of behavior it is going to be more difficult to pick this behavior back up later and work on variety again. You run into this problem when you are training a new behavior and you reinforce one approximation too much, it is harder to move on to the next approximation.

Since training and maintaining are in my mind the same job, I like to keep the variety in the behavior. If you can make your training sessions different every time and make variety the norm you will have more resilient behavior and the animal will be used to change.

Generalization

A behavior that is going to be maintained should be very well generalized to many different trainers, areas and situations. In the wild an animal never has the same day twice. It is important to keep up with the behaviors that the animal already knows and maintain them at a high level. This means the animal will perform the behavior under many different circumstances. We worked in a zoo where a gorilla was trained to receive an injection in the shoulder. He was very good at receiving the injection but when the day came for the knock down and the veterinarian told the keepers to withhold the food and water, the gorilla noticed the slight change in environment and did not come to the wire to receive the injection. So they had to start again and trained the behavior without the water and food present, and the procedure was rescheduled for the next week.

When training free flight birds we start in a comfortable environment for the bird, most often their cage. Once the bird performs the behavior well, without hesitation, like in all training we move on to the next approximation. With these birds we take them to a new area they have not been before and see how they perform. Most of the time the new environment changes the performance of the behavior. When the bird performs the behavior in the new environment without hesitation we move to the next new enclosure. We keep moving from new area to new area until the bird performs the behavior without hesitation the first time it gets in a new environment. Then it might be time to go outside. Performance of a behavior under different circumstances shows the reliability of our birds to work in a free flight situation.

That translates in our work at zoos very well. We might train a station behavior in one stall first where the animal has fewer distractions, to set it up for success. Then we might just try it in the stall next door and see how well the animal does the behavior. Once the animal performs the behavior very reliably in that setting, we take it on exhibit. You could also train the behavior on the exhibit and then change locations where you ask for the behavior.

Of course this is a delicate balance. Like we said earlier when we train the animal initially we set it up for success, we train the behavior in one area until we see no hesitation after the presentation of the cue then we start to change the environment. This can be considered just another approximation to the final behavior. Whenever we take a big step in our approximation we might relax our criteria for the behavior we are asking for. Once the behavior has been generalized we consider how best to maintain it but like I stated earlier for me training a behavior is never done, and we should keep stimulus diversity high “around” the behavior.

Training Sessions

When you are doing a training session I would like to encourage you to ask a lot of why questions: “Why am I doing a training session?” “Why am I training this behavior?” “Why am I asking for these behaviors?” The answers to these questions should give you insight to where you can improve your session and make it truly valuable for the animal.

You can also ask, “Did I vary anything in the environment or did I ask the same old same old behavior and conditions?” “Did I train a new behavior which could be very enriching?” Now that most facilities are training we should start getting better at what we are training and why we are training. How can we keep the animals engaged and give them something important to do? How can we give the animals an opportunity to make a choice and experience the consequence of their decisions? We all behave for an effect in a highly diverse environment. That is an underlying fact of life on planet earth. If we can give an animal a way to affect its own outcomes in a highly diverse environment, we can greatly increase its quality of life. In the end that is what our job is and that is what we should aim for as keepers/trainers.