Behavior Basics for Training Education Animals

Positive reinforcement, like clicker training, has gained popularity over the past decades for training household and zoological animals, but it has only recently become a valuable tool for training wild raptors and animals in our field. Research, observations and anecdotal evidence have told us the best way to give a wild raptor a good quality life in captivity is through operant training, which includes the same kind of techniques you would use to clicker train your dog. With operant training we build up trust with our animals by giving them the power and choice to say yes or no. Operant conditioning uses consequences of the animal's action to influence its behavior. No weight management is necessary, and yes, you can even do this with owls!

Build the Trust.

If you have a raptor that shows a stress response to your glove when you grab it for programs, these stress responses are often innate, or **respondent.** We tend to increase those fears by ignoring what they are trying to tell us, and catching them over and over again. If they are exposed to this sort of interaction often, then sometimes merely the site of us or our glove will increase this fear response, and surprise! Just like Pavlov using the bell to pair with a dog salivating, we have now **classically conditioned** this animal to pair us with a very elicit stress and escape response. Classical conditioning is involuntary and involves things happening around the animal no matter what it does.

Often the first step of behavior modification is to build up trust with our animals. This means putting a hold on programs, and to stop grabbing the bird. Dr. Susan Friedman describes trust as a bank account. This is your personal bank account, and you may start way in the negative and have to work to get back into the positive. It is recommended that ideally one person works with the bird with another as a backup.

First, we must desensitize the animal to us, which makes us a neutral stimulus, then we must counter-condition ourselves to make

ourselves more reinforcing. When I was first taught about desensitization, it meant standing in an enclosure with an animal in order to get used to you. This desensitization technique is called flooding or **learned helplessness**. We are taking away the birds choice to get away, and it eventually realizes there is no escape, and gives up. No behaviors are learned here. With **desensitization**, the aversive stimuli (us) become a neutral stimuli by exposing the bird to us without eliciting a fear response, which means we must know what the animal's fear response looks like. Our goal is to be able to approach the animal without eliciting the fear response (building up that bank account!). Once we become a neutral stimuli we can pair ourselves with reinforcement (**counter-conditioning**) to become a more engaging stimuli.

Operant training

is based upon the science of why an animal behaves the way it does. Simply put, behaviors do not occur in a vacuum, and animals (and people!) behave for a reason, or a consequence. With operant training, we use these consequences to modify the behavior. The study of Applied Behavioral Analysis calls this the ABC's of behavior: A (Environment that sets up the behavior), B (behavior), then C (consequence of the behavior).

When I first started working with hawks I noticed that when I opened their enclosure they would clack, fly or step away. Before changing this behavior, I had to know what was motivating the bird. Let's look at the ABC's of this behavior:

> **A (you walk in), B (Hawk flies), then C (it gets away from you).**

The hawk's motivation was the consequence of getting away from me in that moment, which worked!

Through operant training, we alter that consequence (C) to modify behavior (B). This is where reinforcement and punishment come in.

Positive Reinforcement	Positive Punishment
Add something to the environment to increase the behavior. Give a treat (C) when a dog sits (B) to increase the "sit" command.	Add something to the environment to decrease the behavior. Knee in the chest (C) when a dog jumps (B) to decrease jumping.
Negative Reinforcement	**Negative Punishment**
Take something away from the environment to increase the behavior. Put negative pressure on a horse (C) to increase getting it to back up (B).	Take something away from the environment to decrease the behavior. Ignore an attention-seeking dog (C) when it jumps (B) to decrease jumping.

Positive Reinforcement is something that increases the behavior, whereas **punishment** is something that decreases behavior. Positive and negative are simple math terms, not a way of saying good or bad. **Positive** means to add something to the environment, while **negative** means to take something away from the environment (an aversive that an animal wants to get away from).

If you want a hawk to engage with you when you walk into the enclosure, but what you get is an escape attempt or stressed out behavior, then you look at the science of why the hawk is behaving that way. For example: A (you walk in), B(hawk flies), then C (it gets away from you). That hawk is flying away or walking back to get away from you, and it's working as a reward in that moment. You must alter the C (consequence) in order to alter the behavior.

In this scenario, you must make the consequence more rewarding than getting away from you in order to alter the behavior. Research has shown us that positive reinforcement is the most effective way of training an animal, and the best way to do this with raptors is through food. They become more engaged as they seek the reward.

The advantage to this is that you build up the trust with your animal while encouraging the best possible relationship. Building trust also positively affects the animal's quality of life and welfare. The disadvantage is that it does take time, since you are working with a wild animal.

Try to keep it positive!

Shaping the behavior.
It would be great if you could just hold out your glove and the bird hops right on, but unfortunately that is not the case. Instead, you must **shape the behavior**, or reinforce each progressive step the animal makes towards that behavior. In this scenario of a bird stepping up on a glove, we might choose a shaping plan like this: bird looks at the glove (reward), bird makes one step towards the glove (reward), bird puts one foot on the glove (reward), bird puts two feet on the glove (reward).

Review your work.
I thought I was making great success with one of the owls I train with, but I could not seem to get the owl to take the next step. After talking with my mentor, she asked me to send a video for her review. We looked at the video together only to discover that the owl was showing signs of stress that I did not notice in the moment. Animals cannot learn new behaviors when they are highly stressed because they are just focusing on surviving. Once I addressed the stress, I noticed much improvement. I have used this strategy to review my work over and over again, and it has proved to be very useful. I can see what I need to tweak to set the animal up for success.

With time, commitment and patience, we can build a better relationship with the animals in our care. Just like Arnold Schwarzenegger says, "there is no magic pill," and with training wild animals that's no exception, but the results are worth the work.