

UNDERSTANDING AND USING BEHAVIOR MODIFICATION

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Understanding behavior modification techniques is essential when trying to change objectionable pet behaviors. Because behavior is something that is occurring all the time, when you remove a behavior from an animal's repertoire, it will be replaced with something else. The goal of behavior therapy is to structure that replacement behavior in the correct way.

Definitions of learning and behavior modification terms Reinforcement is a positive relationship between behavior and outcome. Because the outcome is good, the behavior is likely to be repeated. This is often called positive reinforcement, and may be used synonymously with the term reward. Reinforcement, whether positive or negative refers to procedures that are employed which result in an increase in a response. With negative reinforcement the removal of something unpleasant increases the likelihood that a behavior will be repeated.

Punishment is also a situation where there is a positive relationship between behavior and outcome, but the outcome is negative. Because the outcome is negative, the behavior should decrease. However, punishment also has the possibility of causing anxiety, fear and aggression and is not the recommended means of changing behavior. Positive punishment is the addition of something aversive to make behavior decrease or stop while negative punishment is the removal of something pleasant or withholding something pleasurable'. Common examples of negative punishment include "timeout" and removal of play items. Punishment involves procedures that result in a decrease in responding'.

Classical conditioning (the term conditioning refers to learning) is the pairing of an unconditioned stimulus, with a neutral stimulus that results in a conditioned stimulus and a conditioned response. Classical conditioning can occur in both positive and negative ways. The timing of the presentation of the stimulus, the saliency of the stimulus, the predictability of the stimulus and the reinforcement influences the conditioning process.

Conditioned emotional response refers to establishing fears through a classical conditioning paradigm. This entails the association of a fear-producing stimulus with a previously neutral object. Once this occurs, the object itself may be enough to elicit the fearful response. This type of learning can be very powerful and hard to extinguish.

Operant conditioning is learning how one's actions result in consequences; i.e. the individual causes the results. This is a stimulus-response/response-consequence relationship. In other words, what the animal does is critical to what happens next and those results dictate if the behavior will occur again. Behavior becomes more likely if it is reinforced, less likely if it is punished.

Counter conditioning (also called response substitution) is teaching a behavior that is incompatible with the previous response. In other words, instead of trying to eliminate a conditioned response by extinction, you eliminate it by conditioning another response that is incompatible with the original one and replaces it. Counter conditioning refers to how an animal feels or reacts when exposed to a stimulus as opposed to what it does. Therefore, facial expressions, body postures, respiratory rate etc. are all-important components in the response. An example is to teach a dog to sit and stay instead of lunging. What is desired is that the response be behaviorally and physiologically different from the previous response. It is often helpful to cue this response with a word or phrase such as "relax", "easy" or "chill".

Classical counter conditioning occurs when you pair a previous stimulus with some unconditioned response such as food. To change an unpleasant association with a stimulus to one that is pleasant, a stimulus that produces a positive response (e.g. favored food, toy) should be paired with each presentation of the stimulus. The goal is to change the association with the stimulus. In practical terms, this means that rather than the stimulus (person, animal, place, or thing)

being associated with something unpleasant, the stimulus becomes predictive of something pleasant.

Systematic Desensitization is gradually exposing an animal to stimuli at a low level so as not to evoke an undesirable response and conditioning relaxation responses instead. The pet is exposed to a fear-evoking stimulus at a level that is just below the threshold at which fear would be exhibited. Paired with counter conditioning, this allows animals to learn to behave properly to stimuli that caused fear, aggression or other problem behaviors. The stimuli must be presented on a gradient from low to high without evoking the inappropriate or unwanted response. Therefore, the arrangement of the stimuli becomes very important.

Flooding is used to treat fears of harmless stimuli by forcing the animal to stay in the presence of the stimuli until the fear is extinguished. This procedure is difficult to use in animals since it may be difficult to judge when all physiologic signs and emotional signs of fear are gone. If done improperly, flooding can increase rather than decrease problem behaviors.

Desensitization and counter conditioning; working together to change behavior

Desensitization is used to change the way the pet feels about the stimulus. In order for that to occur, the stimulus must be below the fear or anxiety threshold. Counter conditioning is then used to change the pet's underlying emotional state to one that is positive. As gradual exposure to the stimulus allows the pet to respond appropriately, the intensity can gradually be increased. In order to be effective, several components of the procedure must be considered.

- Begin with the stimulus intensity least likely to cause an adverse response
- Pick an environment that is unlikely to cause increased fear or anxiety
- Control the presentation of the stimulus and its intensity
- Only use favored rewards for training to increase desirability
- Use effective means of pet control such as headcollars, leashes, crates and muzzles.

Reinforcers

Each animal will have items that they find particularly appealing. A list of such items should be made, starting with those that are least appealing to those that are very desirable. The most desirable rewards should be reserved only for training sessions so that they are motivating and help associate the stimulus with something good. Other rewards can be used for training sessions that work on other situations or control.

Stimulus gradient

Prior to proceeding with desensitization, each stimulus that causes a fearful response must be identified. Next a gradient of intensity must be created, placing the stimuli in an order from low (those least likely to cause a fearful response) to high (those most likely to cause a fearful response). Keep in mind that distance, volume, distinguishing characteristics such as hats, height, gender and actions (reaching, running, talking). inanimate stimuli such as bicycles, should all be considered and factored into the gradient.

Obstacles to treatment success in counter conditioning and desensitization (CC/DS)

Generally there are five obstacles to treatment success.

- **Stimulus discrimination**, the ability of the animal to distinguish the stimulus. In addition, the stimuli presented must be relevant and control the behavior or the animal does not learn the appropriate response. Then the animal must learn what to do in the presence of the stimulus.
 - For discrimination to happen, an accurate behavioral history is essential to create the appropriate training environment.
- **Transfer of learning** must take place for CCDS to work. The animal must learn to pay attention to the relevant stimulus and ignore irrelevant stimuli.
- The animal must learn to **generalize** from the learning situation to the real world. This requires the behaviorist to know

what stimuli are controlling the response.

Once the animal learns the task in easy situations, the stimulus intensity and variety must be changed to help the animal generalize the learned response to multiple situations.

- **Inappropriate rewards** may allow the animal to discriminate improperly and learn a different stimulus-response relationship than what was intended.

- Owners need to know what behaviors they are intending to reward. Without good timing and observation of the pet, they may reward the incorrect responses and problem behaviors worsen rather than improve.

- **The animal can become more sensitive rather than less sensitive** to the stimulus.

- If desensitization exercises proceed in spite of the animal showing anxiety or fearful responses the animal is likely to become more agitated rather than less agitated. Careful monitoring of the behavior treatment program and the pet responses are needed throughout the process to insure progress is being made in the correct direction.

To overcome these obstacles, accurate history taking, good observational skills and appropriately set up treatment plans are important. The behaviorist and the owner must be willing to proceed slowly and set up the animal to succeed. Finally, the animal must be exposed to a variety of stimuli once the behavior is learned.

Changing behavior takes a good history, a realistic treatment plan and good supervision and cooperation between behaviorist and pet owner as well as a complete understanding of learning and behavior modification techniques.