

On Behavior

Editor Terry Long, CPDT

Reinforcing Fear: Why the Debate?

Pia Silvani, CPDT

Long ago, I sat at seminars hearing the same comments repeated over and over. "Do not give your fearful dog attention or you will reinforce his fear." "Do not tell a fearful dog 'it's okay' since you are giving him praise or permission to be fearful." "Never pick up a fearful puppy or small dog since you are reinforcing his fear." "Do not pet a dog that is fearful since you are rewarding his fear and he will become more fearful."

I must admit I did believe that if you pet your dog during a fearful period, he would become more fearful. This is what "they" told me. Never wanting to close the door to anything new, I decided to listen, use some critical thinking, and sit back and decipher how I felt about it—while also researching the topic and talking to the experts.

What is Fear?

Before deciding if fear can be reinforced, what actually is fear? Is it a behavior or an emotion? According to Dr. Patricia McConnell, fear is a basic emotion that all living beings deal with. "Fear is a system that helps to keep us safe; it is genetic. Our ancestors had it, or we wouldn't be here. It is complicated, primitive and all over the place." (McConnell, 2006) When asked if fear is really that basic, she chuckled and said "No, if it only were!" Fear is only one kind of emotion, and emotions are the result of brain chemicals, learned associations, and genetics. "Emotions are messy" according to John Ratey (2001).

Fear is complex since there is an interplay of emotions and physiological responses (Reid, 2000). In order to thoroughly study fear in animals, we need to identify the triggers that cause the animal to react. However, "fear in animals is inferred by observing the behavior of the animal in response to a potentially harmless stimulus and assessing related physiological response." (Wright, et al 2005), (King, et al 2003), (Salzen, 1989), (Gray 1987)

Animals' brains have a larger amygdala and a smaller cerebral cortex than humans. Since the amygdala modulates emotion, and the cortex governs rational thought, we can assume that animals feel emotions on a much more intense scale than we do. They are also not able to process rational thought in the same way that we do. It follows then that rational thought, which is suppressed in humans by the neurochemicals that are released during fearful episodes, are completely shut off in animals. (Lindsay, 2000)

Is fear a necessary emotion? In the wild, fear is an adaptive behavior and serves to help animals survive. Most living beings are hard-wired to respond to dangers in order to survive and/or avoid injury. The expression of fear is linked to emotions and is not always under our control. The key words are "emotions" and "not under our control."



Rational Thought vs. Emotional States

When we say that an emotion (e.g., fear) can be reinforced, we are confusing two completely different types of learning: classical and operant conditioning. As you know as a trainer seeking to elicit behaviors, operant conditioning is about obtaining a behavior and following it with a consequence. Operant conditioning focuses on an interactive reward-punishment structure with a particular goal or outcome. The dog does not necessarily need to be relaxed or alter its behavior. For example, if you are attempting to get your dog to target an object by using shaping through successive approximation, you are going to reward the dog for the appropriate behavior by using a marker, followed by a reward. If the dog is not performing the appropriate behavior, there is no reward. You are not focusing on the emotional state of the dog. The dog can be aroused (sometimes a good thing) or frustrated (not uncommon for crossover dogs). Further, you are not focused on changing the emotional state of the dog. You are simply focusing on teaching a behavior.

Emotional responses are more easily influenced through classical conditioning. This is because cognitive abilities are impeded by neurochemicals that ready the body for fight or flight during times of high emotion. To react to something that is a danger (i.e., the scary event) your heart rate has to increase so that you have enough blood to your brain while your legs are running! This is achieved by those neurochemicals. While this is going on, you are in pure reaction mode, incapable of a more rational thought.

Is Behavior Operant or Classical?

The word "behavior" seems to confuse many trainers. ➤

The key to remember is that behaviors can be learned through conditioning (operant), association (reflexive, i.e., salivation, elimination), or emotions (classical, i.e., fear, arousal, excitement). When trainers discuss behavior, they immediately think of operant and focus on consequences. While this is partially true, reflexive behaviors fall under the category of classical, not operant, and have nothing to do with reinforcement from an operant standpoint. Bob Bailey reduces complicated academic definitions of behavior to “anything the animal does” and that would include both behaviors resulting from classical conditioning or operant conditioning. Thus, it bears remembering that “behavior” isn’t only what we as trainers purposefully train. Classical conditioning produces behaviors as well. However, the difference in behaviors produced by operant and classical is critical to understand. How are they learned?

There are times when unwanted behaviors, such as aggression and avoidance, just to name two, are symptoms of an underlying emotional state, such as fear. These emotions are influenced by classical conditioning: The dog has learned to make an association that triggers a fearful reaction and that fearful response causes the dog to behave by hiding behind the owner or lunging and growling, both very clear behaviors. Unless the dog has grown up isolated from the world, you can do quite a bit to help a dog get over its fears and, thus, change behavior. When we attempt to change or alter behaviors that are classically conditioned, we attempt to reduce negative emotional behaviors and replace them with positive emotional behaviors. We want to improve the dog’s emotional state and change the fear response. (Wright, et al 2005)

So, let us take a closer look at the debate by looking at ways to help dogs overcome their fears. Counterconditioning is one of the most popular ways to help animals change their emotional and behavioral responses. There are two types of counterconditioning that we use: classical counterconditioning and operant counterconditioning.

Classical Counterconditioning – A feared stimulus is presented to the dog and linked with something pleasant. The goal is to replace the anxiety or distress response with that of being calmer. When we look at classical counterconditioning, we are not concerned about what the animal is “doing” at the time. The objective is to change the emotion, not the behavior. For example, a dog might be fearful of another dog, resulting in growling, barking, panting and more. If the neutral dog is presented at a comfortable distance from the dog enough times (typically used with desensitization), the dog’s fear should begin to switch. The dog has made a new association over the old one. The neutral dog is no longer a threat. Instead, it produces something good. If the dog expects something good at the sight of the other dog, the emotional state should switch. As a result, the growling, barking, and panting should begin to subside. I recently used petting as a means of changing the emotional state of a dog since play and food was not motivating enough for the dog—touch was.

Operant Counterconditioning – Our focus is to condition a behavior that is incompatible with the

undesirable behavior. Basically, what you are doing is providing reinforcement for a different behavior and not providing reinforcement for the old behavior (Tarpy and Bourne 1982). The dog is taught to engage in an entirely different behavior than it did in the past.

With both types of counterconditioning, it is critical to keep the dog under threshold at all times to avoid setbacks. Basically, I tell clients to “train”—don’t “test.” It is important to differentiate between classical and operant counterconditioning when dealing with behavioral changes. Emotions drive behavior. If we can change the emotional state of the animal first, behavioral changes should be easy.

Laboratory examples of counterconditioning involve mostly food. Yet, others may use activities such as play to successfully treat anxiety, fear, and anger. (Spiegler and Guevremont 1993). Dr. Daniel Tortora (1998) argues that play should be used as often as possible over food when treating distress or anxiety since play is more emotionally incompatible with fear than eating.

Dr. Pamela Reid has used play with her own dog that exhibited extreme fear when going through an automated car wash. She found that after several repetitions of playing with her dog, the dog’s fearful reaction decreased greatly. He did not become *more* fearful as a result of her playing with him. However, when she gave the dog his favorite treats, it had *no discernible impact* on his fear. The dog still exhibited anxiety and shivered. (Wright, et al 2005) Note that neither food nor toys, i.e., reinforcement, made his fear *worse!*

Play obviously would not be the treatment choice for dogs if they do not play with their humans. Many of you may argue, and rightfully so, that the dog enjoys play but is so fearful it cannot play. However, we can have the same argument about food. If a dog will not play and will not eat in the presence of the fear-provoking stimulus, we have no starting point. This is the time when I recommend seeking the help of a veterinary behaviorist since it is obvious that the fear is extreme, if not bordering on phobic.

Beliefs vs. Logic

There is reluctance in using classical counterconditioning when dealing with emotional behaviors since many feel that the undesirable behavior will be reinforced and that soothing the dog will reward timid or fearful behavior. However, studies reveal that it is difficult to operantly condition anxiety-related behaviors (Aloff, 2001, Miller, 2001, Price 2001).

Logic also tells us that it is difficult to punish or reinforce involuntary or reflexive behaviors. Let us look at a few other examples:

If your dog is afraid of loud noises, such as thunder, and you decided to give him a scratch behind the ear and a little hug should he run to you in a panic, you are *not* rewarding his fear. If *your* behavior calms the dog down, then the dog obviously did not become more fearful. You helped change his emotional state. If the dog is phobic [continued on next page]

and an ear scratch or hug does not help, then what you did really does not make a difference. The dog remains the same emotionally—not worse, not better.

If your dog is fearful in a particular situation and suddenly freezes, and you give the dog a massage or attempt to sooth him by using a calm tone of voice, perhaps by saying “it’s okay,” and the dog begins to relax, you will *not* increase his level of fear nor will the dog become more stiff or frozen the next time he is in the same situation. It will not increase the frequency of freezing. This is what reinforcement does, correct? Reinforcement increases behaviors. Instead, the dog may be put in the same situation again and look to you for guidance. Your calm tone relaxes the dog. This is more powerful than any reinforcement given since you are changing the emotional state. Classical will win over operant.

My Golden Retriever, Chester, was extremely thunder phobic. He paced, drooled, panted, hid, quivered and trembled, sweat from his footpads and, at times, expressed his anal sacs when we heard very loud cracks of lightening (all reflexive behaviors). He would jump up on my bed. I told him to get off; he would snuggle up to me. I told him to go lay down; he hid in the closet. I let him be. I didn’t want to “reinforce” his fear by interacting with him.

During one storm, he was absolutely beside himself and started to chew on his paws. Enough was enough. As tears rolled down my cheek, I felt that I did my poor dog a disservice by making him suffer as long as he did. I went with my gut and invited him up onto the bed, gave him a deep muscle massage and as the pounding of his heart slowed down, the drooling stopped and his eyes closed, I gave him a hug, kiss, and told him how sorry I was. I bought him a new bed, put it in the closet and filled it up with his toys. As the years went on his fears subsided. He would lie next to my bed and actually sleep during a storm.

Respecting Animal Emotions

In conclusion, it is time we start to look at our pets as living beings with emotions. They need empathy, care and touch, especially when fearful. I do not believe the earth is flat because this is what the experts have proven through various studies. There might be some of you that still debate that, which is fine. Studies have been done on this topic as well, with good evidence that you cannot “reinforce fear.” But, if you feel the earth is flat or want to believe you can make a dog more fearful by petting it, I suggest you give it a try before you stomp your feet and tell me I’m nuts. A little bit of love and affection should make *you* feel better!

References

Aloff, B. (2001). *Positive reinforcement: Training dogs in the real world*. Neptune City, NJ: T.F.H. Publications.

Hetts, S. (2007). Can you sooth fear away? Consider these new ideas when trying to calm canine anxiety. *Dog Watch*, November 2007

Hetts, S. (1999). *Pet behavior protocols: What to say, what to do, when to refer*. Lakewood, CO: American Animal Hospital Association Press, pp. 153-155.

Lindsay, S. (2000). *Handbook of applied dog behavior and training, volume one*. Ames, IA: Iowa State University Press, pp. 85-90, p. 105.

McConnell, P.B. (2006). *For the love of a dog. Understanding emotion in you and your best friend*. New York, NY: Ballantine Books, pp. 110-113.

Miller, P. (2001). *The power of positive dog training*. New York, NY: Hungry Minds.

Overall, K. (1997). *Clinical behavioral medicine for small animals*. St. Louis, MO: Mosby.

Price, C. (2001). *Understanding the rescue dog*. Bristol, UK: Broadcast Books.

Price, E.O. (1984). Behavioral genetics and the process of animal domestication. In Grandin, T. (ed.), *Genetics and the behavior of domestic animals*. New York, NY: Academic Press: 31-66.

Ratey, J.J. (2001). *A users guide to the brain: Perception, attention, and the four theaters of the brain*. New York, NY: Vintage Books.

Reid, P.J. (2000). Scared dog. Treating a victim of trauma. *Dogs in Canada*. April 2000.

Reid, P.J. (1996). *Excel-erated learning: Explaining in plain English how dogs learn and how best to teach them*. Oakland, CA: James and Kenneth Publishers.

Tarpy, R.M., Bourne, L.E. Jr. (1982). *Principles of animal learning and motivation*. Glenview, ILL: Scott, Foresman.

Scavio, M.J. Jr. (1974). Classical-classical transfer: Effects of prior aversive conditioning upon appetitive conditioning in rabbits. (*Oryctolagus cuniculus*). *J Comp Physiol Psych*. 86:107-115.

Spiegler M.D., Guevremont D.C. (1993). *Contemporary behavior therapy, 2nd ed*. Pacific Grove, CA: Brooks/Cole.

Tortora, D.F. (1998). *Personal conversation*. New Jersey City University.

Wright, J.C., Reid, P.J., Rozier, Z. (2005). Treatment of emotional distress and disorders – non-pharmacological methods. *Mental Health and Well Being in Animals*, pp. 145-157. >

Recommended Reading

Askins, R. (2002). *Shadow mountain. A memoir of wolves, a woman and the wild*. New York, NY: Anchor Books.

Clothier, S. (2002). *Bones would rain from the sky – Deepening our relationships with dogs*. NY, NY: Warner Books.

Flowers, A. with Dixon, A. (2001). *Alone across the Arctic. One woman's epic journey by dog team*. Alaska: Alaska Northwest Books.

Gladwell, M. (2005). *Blink. The power of thinking without thinking*. New York, NY: Little, Brown and Company.

Hetts, S. and Estep, D. (2007). *Counter conditioning and desensitization. using techniques effectively to modify behavior*. (DVD) Littleton, CO: Animal Behavior Associates.

Hetts, S. (1999). *Pet behavior protocols: What to say, what to do, when to refer*. Lakewood, CO: American Animal Hospital Association Press.

Masson, J.M., McCarthy, S. (1995). *When elephants weep – The emotional lives of animals*. New York, NY: Dell Publishing.

McConnell, P.B. (2006). *For the love of a dog. Understanding emotion in you and your best friend*. New York, NY: Ballantine Books.

McElroy, S. (1996) *Animals as teachers and healers. True stories and reflections*. Oregon: New Sage Press.

Reid, P.J. (1996). *Excel-erated learning: Explaining in plain English how dogs learn and how best to teach them*. Oakland, CA: James and Kenneth Publishers.

Pia Silvani, CPDT, CABC, is the Director of Training and Behavior at St. Hubert's Animal Welfare Center in Madison, NJ (www.sthuberts.org).

*"On Behavior" editor Terry Long, CPDT, is a professional writer, dog trainer, and behavior counselor in Long Beach, CA. She provides private and group classes for pet manners, agility, and behavior modification, specializing in clicker training and other reward-based techniques. She is the former Managing Editor of **The APDT Chronicle of the Dog**. In 2006 her article for the **Chronicle**, "Shape for Confidence" (Mar/Apr), won a coveted 1st-place Maxwell Award for Best Feature in a canine newspaper or newsletter (non-healthcare topic) from the Dog Writers Association of America (DWAA.org). She also authors **Dog World** magazine's "About Agility" column, nominated for Best Magazine Column of 2006 by the DWAA. She can be reached through her Web site at www.dogpact.com.*