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The History of Dog Training and Its Importance to Modern Day Training Techniques

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For Essie:

My four-legged sidekick who helped me conquer the world.

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Introduction

Dogs have stood beside man as their best friends and companions throughout history. This relationship has been documented by every civilization. In each community, there is some interaction with dogs. Whether it is used as a symbol of uncleanliness, a protective guardian, or a sign of wealth and power, the dog has remained a constant in human civilization. From Biblical times forward, dogs appear in a variety of roles within human society. Today, their status has evolved to include everything from pet status to working professionals. It is this long history that forms the foundation of the dog-human relationship. Understanding it is crucial to guide interactions with modern-day dogs, especially in the training environment.

A study of the Bible reveals that dogs are mentioned over forty times throughout both testaments (Moller-Christensen & Jorgensen, 1965). Dogs appear throughout the Bible primarily in a negative light. The Israelites and later Jews and early Christians were familiar with dogs primarily as a nuisance. Dogs regularly ran through the streets, howling and barking all night long. Wild packs were known to attack people and devour freshly interred bodies (Pinney, 1964, p. 119). This familiarity and attitude towards dogs is used throughout Scripture to convey various messages. In Psalms 59:14-15 David writes, “Each evening they come back, howling like dogs and prowling about the city. They wander about for food and growl if they do not get their fill” (*English Standard Version Bible*, 2016). In this Psalm, David is comparing the behavior of his enemies to that of the Lord. He equates his enemies' behavior to the nuisance behavior of dogs because it is something the Israelites are familiar with and would have been irritated and annoyed by.

Despite the primarily negative light dogs are portrayed in in the Bible, there is also Scripture that references them helping guard flocks of sheep. Job 30:1 says, “But now they laugh

at me, men who are younger than I, whose fathers I would have disdained to set with the dogs of my flock" (*English Standard Version Bible*, 2016). Although this verse references dogs to emphasize their distaste for the young men, it also indicates that dogs were being used in a working capacity during Bible times (Pinney, 1964, p. 118). Regardless of the culture's acceptance of dogs, these Biblical references indicate that mankind has had a relationship with dogs in their everyday life from the earliest Bible times. The evidence we have of human-canine interactions from Biblical times enhances our understanding of dogs' development as a species, as well as our understanding of their trainability.

These early dogs that are mentioned throughout the Bible were some of the earliest breeds to develop. These dogs were mere generations from the wolves and jackals they developed from (Osborn & Osbornová, n.d.). One of the earliest breeds still in existence today is the Canaan Dog. These dogs were crucial to life in modern-day Israel as they served as guardians and shepherds for flocks and alerted their master to the arrival of strangers, both human and animal (Shiboleth, 2016). This primitive breed served as one of the founding members of what would become known as the oldest family of dogs, the Spitzes. From these early foundational breeds, mankind began a relationship with dogs that spans to the present day. Understanding the history of this relationship between man and dog is crucial for skillfully applying today's dog training methodology.

Regardless of where they are found globally, the primitive Spitzes all maintain the same essential characteristics: pricked ears, a dense, weather-proof coat, a large and functional head, well-developed senses, gait, strength, and stamina (Shiboleth, 2016). These same physical characteristics are found in the Canaan Dog's neighbors, the Egyptian 'Pariah' (both large and small size) and 'Tesem.' While the term 'pariah' can be used more generically to refer to any

stray or feral dog in Egypt, historians also use it to refer to specific unnamed dog breeds. The first dog breed this term refers to is the larger and stouter ‘Pariah,’ which was often pictured in hieroglyphics accompanying early hunters. The smaller version of the early Egyptian ‘Pariah’ was a small, stocky dog with a straight tail and natural ground herding instincts. Today, the modern version of this dog has become famous throughout society as the Pomeranian.

While both versions of the Pariah were essential to life in early Egypt, neither carried quite the same status or importance as the ‘Tesem.’ First arriving in the Nile River valley as hunting and guard dogs, the Tesem quickly developed into three distinct breeds during the Dynastic Period. What remained known as the Tesem developed a slender muzzle and body, pricked ears, and tightly curled tails. These dogs are often depicted in hieroglyphics as pets, and further research reveals that in other parts of Africa, the breed became known by its modern name, the ‘Basenji.’ The second iteration of the Tesem is the contemporary day Greyhound. Well-known for its thin stature, pricked ears, and saber tale, this dog has become a staple of sighthounds and dog racing; however, during Egyptian times, it was relatively uncommon and is not often depicted in hieroglyphics. Finally, the most important version of the Tesem was the Saluki, or “Egyptian Greyhound.” This dog breed is similar in appearance and stature to the common greyhound. However, it distinguished itself by becoming a symbol of Egyptian royalty. Many of the treasures and images in the Tutankhamun Tomb depict Salukis (Osborn & Osbornová, n.d.). These three versions of the Tesem form the foundation for the Egyptian dog breeds of today.

While this brief history of primitive dog breeds is fascinating, one must wonder how this relates to training dogs. While the breeds themselves specifically do not provide insight into dog training, their existence and the preservation of their history reveal something far more

significant: the importance of dogs to man. Dogs have played a crucial role in the history of humanity from Biblical times forward. Understanding this relationship and its importance is vital for someone wanting to become a proficient dog trainer. Dogs and humans have centuries of codependence together. Dogs have fought beside humans in war, licked their masters' wounds, played with and helped raise children, and provided comfort and companionship throughout the generations.

Most importantly, dogs have provided unconditional love. If humans expect to work with dogs to accomplish various tasks and skills, they must recognize this fact and strive to train them in a way that honors the sanctity of this relationship. This is why every dog trainer must thoroughly understand the history of the human-dog relationship and dog training. Only through this understanding can an effective application of modern training methods occur.

From Tools to Pets

While dogs have been a part of human life since creation, the first emergence of dog training as a school of thought was in the 1800s (Muniowski, 2019, p. 120). The 19th Century saw a plethora of major changes, with perhaps the most significant being the Industrial Revolution. This development saw a shift from a primarily agrarian culture to a more urban lifestyle for many families. In connection with this, many families were making more money, providing them with the opportunity to have discretionary income for the first time. While this new extra income had effects across society, it allowed people to keep a dog as only a pet and not as a working animal. Naturally, most dogs could not immediately transition into the households as family members; thus, the need for additional training arose.

During the Victorian Period, the main form of discipline for dogs was corporal punishment (Muniowski, 2019, p. 121). Dogs as pets was still a relatively new concept; in many

ways, they were still treated as the working animals they were in the past. This meant the primary training tools of the era were the collar and whip, and any punishment given to the dog was viewed as being in the dog's best interest (Muniowski, 2019, p. 121). The dog training literature of the era supported these views, and many people thought they were doing dogs a great service by beating them with whips or choking them with their collars because it was improving the dog. While this form of training sounds barbaric to modern-day trainers, it is worth remembering that, at this time, they knew no alternative. Dogs were beaten into submission and trained in a way in which fear was the primary motivating factor. Then, biologist Ivan Pavlov and his classical conditioning experiments stepped onto the scene. Pavlov ushered a massive step forward in the history of the dog-human relationship. He brought the study of psychology and how animals learn to the forefront and introduced the modern era of dog training.

How Dogs Learn

Over the past 200 years, research has taught us that animals learn via three distinct avenues. First, they can learn via classical conditioning, a theory first espoused by Ivan Pavlov. Second, they can learn via operant conditioning. This theory was developed by B.F. Skinner as a response to Pavlov and built upon the Law of Effect developed by Edward Thorndike. It is important to mention that while it is not a foundational way that dogs learn, there is a segment of dog trainers who have combined classical and operant conditioning into a hybrid format that has yielded more effective and efficient results. Finally, dogs can learn via social learning. While not as important to the dog training world as classical and operant conditioning, it is still a primary way dogs learn behaviors, and some trainers rely on it as the foundation for their methodologies.

Pavlov and Classical Conditioning

Pavlov first discovered the concept of classical conditioning entirely by accident. In the 1890s, Pavlov was conducting research on the digestive glands of dogs and their connection to the hemispheres of the brain when he noticed a "psychic" phenomenon was also occurring. At the beginning of the experiment, the dogs would only begin salivating when the food was placed before them. As the study progressed, however, he noted that the dogs began to salivate at the sound of the food cart coming down the hallway and the technician entering the food (Rehman et al., 2023). He realized that the dogs were displaying a physiological response in expectation of the food being provided. This accidental discovery became one of the foundational concepts of learning theory.

What Pavlov did not realize during this initial digestive experiment was that he had inadvertently discovered classical conditioning. Initially, the presentation of food (the unconditioned stimulus) in front of the dogs triggered salivation (the unconditioned response). As Pavlov's experiment continued, the dogs underwent unintentional conditioning, and the sounds of the food making its way down the hallway and the technician delivering the food became the conditioned stimulus that generated the unconditioned response (Rehman et al., 2023). He published these findings in connection with his work on the digestive glands in his paper in 1897 entitled *Work of the Digestive Glands*. It was in this work that he first publicly acknowledged the legitimacy of the psychological responses seen in his subjects and credited them as being responsible for the displayed physiological behavior. Pavlov writes,

> Consequently, in the sham feeding experiment, by the act of eating, the excitation of the nerves of the gastric glands depends upon a psychical factor which has here grown into a physiological one, that is to say, is just as much a matter of course and appears quite as

> regularly under given conditions as any other physiological result. Considered from the purely physiological view, the process may be said to be a complicated reflex act (Bapkin, 1949, p. 276).

Pavlov recognized that this was a revolutionary discovery that required further investigation. In his words, "Naturally I could not leave them without considering the so-called psychical stimulation of the salivary glands, i.e., the flow of saliva in the hungry animal or person at the sight of food or during talk about it or even at the thought of it" (Bapkin, 1949, p. 275). This first accidental revelation started him down a path to investigate and eventually accept and even champion the field of psychology.

Pavlov spent the next 25+ years studying conditioned responses in higher mammalians and published his magnum opus entitled *Conditioned Reflexes: An Investigation of The Physiological Activity of the Cerebral Cortex* in 1927. Pavlov outlines his entire work regarding reflexes and the cerebral cortex in this work. The concept of the conditioned reflex is built upon the idea of a nervous reflex first set forth by Descartes. While Pavlov uses complex language and examples to lay out his ideas, a summary of the concept can be simplified to this: Some stimulus in the environment, either external or internal, acts upon a specific sensory receptor. This triggers an impulse that travels to the brain, where it is interpreted and sent back out as a new impulse to trigger a specific response in the organism. The whole process happens so quickly that it generates a cause-effect relationship. Each of these reflexes is considered one of two types: *excitatory* (positive) or *inhibitory* (negative). When both types of reflexes are taken together, they can explain every aspect of an organism (Pavlov, 1927, pp. 7-8).

Pavlov's work was not complete, and he continued exploring the concept of conditioned v. unconditioned stimuli and conditioned v. unconditioned responses. Building upon his

previous experiment with the salivary glands, Pavlov recognized that food generates a reflex in animals naturally; that is, food is an unconditioned stimulus. He questioned whether it would be possible to artificially signal this reflex using a previously neutral stimulus. To test this, Pavlov paired the presentation of food with the artificial stimulus of a bell. Over the course of repeated presentations of the two stimuli together, Pavlov theorized that, eventually, one would be able to elicit the reflex (salivation) with only the sound of the bell. His experiment supported his hypothesis. In tests when the sound of the bell was presented to animals who had undergone conditioning, the noise alone generated the same reflex as seen when the food alone was presented (Pavlov, 1927, pp. 21-22). Pavlov had taken an unconditioned stimulus that could generate an unconditioned response and paired it with a conditioned stimulus. He artificially conditioned the dogs so that when the conditioned stimulus is presented, it triggers the unconditioned response. Pavlov himself termed these types of reflexes "conditioned reflexes" to differentiate them from the inherent "unconditioned reflexes" that animals are born with (Pavlov, 1927, p. 25). This combination of conditioned and unconditioned reflexes forms the foundation of dog training.

Classical conditioning forms the foundation for modern dog training. The ability to develop conditioned reflexes as a response to artificial stimuli is the foundation for clicker training. Simply defined, clicker training is "a technique in which the spontaneous behavior of the animal is gradually shaped by means of strategically timed reinforcements, using the sound of a clicker as a conditioned reinforcement and food as a primary reinforcement" (Fugazza & Miklósi, 2015). In relation to Pavlov's experiment, the initial pairing of the clicker noise is equivalent to his experiments pairing the sound of the bell to the presentation of food. Food is an unconditioned reinforcer for dogs, but to train a dog, one must be able to present food at the

exact moment the desired behavior is presented. Generally, this is impossible. The first problem is that food can often not be delivered at the exact right moment to mark the desired behavior. No human trainer is fast enough to present a treat to their dog at the exact moment their bottom touches the floor when training sit. A standardized click from a clicker is another matter, however. It is possible to deliver the audible click at the proper moment regardless of the distance or speed of the trainer. Properly paired, the clicker serves as the primary reinforcer of the behavior, and the food that follows is secondary.

The best way to visualize this relationship is to think of it as a chain. The chain starts when the trainer pairs the noise of the clicker with the delivery of food. The dog learns that click = treat. Enough repetitions result in the dogs having the conditioned response of excitement, salvation, and a dopamine dump as they expect their reward. The clicker is now ready to be used in training. The trainer begins by either luring or waiting for the dog to deliver the desired behavior spontaneously. When the behavior presents itself, the trainer clicks and then rewards. The click triggers the conditioned reflex, which is then reinforced with the presentation of food. Again, through enough repetition, the dog learns that when they exhibit the desired behavior, it results in a click, which results in food. The equation has now expanded to desired behavior = click = reward.

This is the foundation of clicker training, but it can be expanded to meet many different needs and situations. In the above example, the behavior, click, and reward chain happen very quickly, but that does not mean it always has to. For example, say a trainer is working with a dog on position changes at a distance. It is impossible for the food to be delivered immediately following the click. However, if properly conditioned, it does not matter. The trainer is able to

ask for the desired behavior, click, and then deliver food at a delayed interval. All that matters is that the dog knows the food will be coming at some point.

This does give rise to the issue of persistence and, ultimately, extinction within the clicker training model, a problem Pavlov himself also recognized. In experiments, Pavlov found that the longer the period between the presentation of the conditioned stimulus and the reward (food), the lower the conditioned reflex became. At a latency period of 13 seconds, only three drops of saliva were generated over 30 seconds, compared to 10 drops with a latency period of 3 seconds (Pavlov, 1927, p. 49). The same is true of dog trainers. If the food is not consistently delivered on time, the conditioned reflex to the clicker's sound will eventually become extinct. While the point where extinction occurs will be different for each dog, every dog has a point at which extinction occurs. This means that in practice, it is vital that trainers provide the reward with sufficient timing and frequency to preserve the effectiveness of the clicker.

While the concept of classical conditioning is complex and was only intentionally developed within the past 150 years, it is the foundation upon which dog training (and animal training in general) is built. The first step the majority of trainers will take with a new client is to introduce clicker training and begin to create that conditioned reflex in the dog. While there is a lot of power in this training method, more complex tasks require a higher level of communication with the dog than classical conditioning can provide. This is where Skinner’s operant conditioning enters the picture.

B.F. Skinner and Operant Conditioning

The operant conditioning method is the most useful and valuable method of training animals to respond to a command. Each command is paired so that the animal is aware that consequences (either good or bad) will occur as a result of its behavior (Haverbeke, 2008, p.

111). B.F. Skinner first developed the concept of operant conditioning and published his ideas in *The Behavior of Organisms: An Experimental Analysis*.

B.F. Skinner is often called the "Father of Operant Conditioning," but one must be aware of the foundation upon which Skinner worked. Skinner was well aware of Pavlov and his classical conditioning; however, he believed this viewpoint was too simplistic. In his opinion, more factors and stimuli had to affect the environment that impacted the likelihood of the desired behavior occurring. With this thought in mind, Skinner studied earlier psychological theories before landing on Thorndike's Law of Effect as the foundation for his work. Thorndike's Law of Effect states:

> Of several responses made to the same situation, those which are accompanied or closely followed by satisfaction to the animal will, other things being equal, be more firmly connected with the situation, so that when it recurs, they will be more likely to recur; those which are accompanied or closely followed by discomfort to the animal will, other things being equal, have their connection with the situation weakened so that, when they recur, they will be less likely to occur. The greater the satisfaction or discomfort the greater the strengthening or weakening of the bond (Postman, 1947).

It is this basic theory upon which Skinner's theory of operant conditioning is based. Behavior is reinforced and punished as necessary to either encourage or discourage a behavior recurring in the future.

Skinner first began developing his theory by experimentation involving the aptly named "Skinner's Box." Inside this box was a rat and various mechanisms to allow Skinner to test his hypotheses. The main operant in the box was a small brass rod. When first placed in the box, the rat had no conditioning to the brass bar. Once the rat spontaneously pressed the lever, food was

immediately dispensed. Over one hour, rats generally pressed the lever one to ten times, depending on various factors such as hunger, the presence of other stimuli, etc. Skinner found that this frequency was sufficient for conditioning to take place (Skinner, 1938, pp. 48-51).

This initial experiment relied on a reinforcing stimulus, specifically, the food provided after the rat depressed the lever. Skinner quickly realized that there was more than one way to encourage the desired behavior out of the art beyond just providing food. This is where the true operant component came into play. Skinner developed four quadrants of operant conditioning. Within each quadrant was an option to either positively or negatively reinforce or punish the behavior. The first quadrant is positive reinforcement. This form of operant conditioning involves adding something to the environment, the positive component, to reinforce the behavior that is occurring. An example of this is providing the animal with food following the successful completion of the desired behavior. The other quadrant that uses reinforcement is negative reinforcement. While this still involves reinforcing the exhibited behavior, the reinforcement is accomplished by removing something from the environment. In Skinner's experiments, this was accomplished by charging the box the rat was placed in with an electric shock. This shock only turned off when the rat touched the brass rod. Skinner was proving that you could reinforce the desired behavior (touching the rod) by removing a stimulus from the environment (the electric shock) (Skinner, 1938, pp. 108-109).

Both of the quadrants discussed above involve reinforcing the behavior that is currently being exhibited. There is, however, a definite need to be able to punish the behavior currently being exhibited to discourage it from being repeated in the future. This is where the other two quadrants of operant conditioning focus. Positive punishment involves introducing a stimulus to the environment that discourages the behavior in the future. For the rats in Skinner's

experiments, this was done by electrifying the brass rod so that when they pushed it, it shocked them. The rats quickly learned not to press the brass rod anymore (Skinner, 1938, p. 108). This leaves the final remaining quadrant, negative punishment. Negative punishment involves removing something from the environment the animal desires in order to discourage the behavior from being repeated in the future (Haverbeke, 2008, p. 111). Notably, as Skinner's research progressed, he began to take a negative view of punishment, a viewpoint that has only grown in popularity in the modern era. Those who oppose the use of these punishment quadrants argue that while they do have a high level of efficiency, they can hurt the animal's mental state and motivation to engage in the desired behavior (Haverbeke, 2008, p. 2).

While the theory of operant conditioning is complex, it can be boiled down to one simple sentence: "Behavior 'operates' on the environment, leading to changes that can feed back to the organism to change the future probability of that behavior [increasing or decreasing]" (Hall et al., 2021, p. 6). All one needs to remember with regard to the four quadrants is these four points:

- Positive means adding something to the environment.
- Negative means removing/withholding something from the environment.
- Reinforcement means encouraging a specific behavior to recur.
- Punishment means discouraging a specific behavior from recurring.

Operant conditioning is a critical component in man's ability to train animals. While Skinner initially began his research by working with rats and other simple lab animals, in the decades since, his theories have been applied to many different species, including humans and dogs. The methods of operant conditioning have been in use long before they were ever given a formal name. It, along with classical conditioning, Is the foundation upon which dog training is built.

Hybrid Conditioning

While both classical conditioning and operant conditioning are influential theories on their own, when they are combined, they lead to incredible breakthroughs, especially for dog training. Hybrid conditioning combines the use of classical conditioning as the basis for forming incentive motivation that, in turn, supports the probability of the occurrence of an operant response (Logan, 1979, p. 507). This combination of theories allows for the most efficient means of communication and training with the dog. The process begins with classical conditioning of the markers for communication. Similar to clicker training, the cues, typically a cue word, are classically conditioned to emit a specific response.

A common example is the cue "Yes!" "Yes" is classically conditioned in the dog to cause a positive experience and the expectation of a food (or other valuable) reward to follow. The power of this is that the cue "Yes!" becomes a conditioned positive reinforcer, which allows it to be used in operant conditioning. When the dog exhibits the desired behavior, it can be positively reinforced with the cue "Yes!" This makes operant communication quicker, as there is no need to immediately provide a food, toy, or other intrinsic positive reinforcer; a simple verbal cue elicits the same response.

Another power of hybrid conditioning is the ability to classically condition a positive punishment cue word. Similar to the cue "Yes!" a cue word such as "no!" or "nope" can be classically conditioned to elicit the same response as an intrinsic positive punisher, such as a leash pop or withholding food. Just as the cue "Yes!" allows for a quick and efficient positive reinforcer, the cue "No!" can do the same thing from a positive punishment standpoint.

While the ability to classically condition cue words as operant reinforcers and punishers is beneficial, another crucial component of hybrid conditioning is the variable reward

component. Both Pavlov and Skinner involved a variable reinforcement schedule in their respective theories. Both recognized that the strongest preventative for the extinction of behavior was consistent reinforcement each and every time. With this knowledge, however, it is possible to prevent extinction while only rewarding on a variable schedule. For classical conditioning, this means not providing the intrinsic reward each time the desired behavior is presented as a result of the conditioned stimulus. For operant conditioning, this means not presenting the reinforcer at a delayed time interval or reinforcement ratio. Correctly done, this periodic reinforcement generates a constant strength that persists without change, even under the periodic schedule (Skinner, 1938, p. 126). However, this schedule changes when the two theories are combined in the hybrid format. In the hybrid format, the operant behavior is controlled by the reinforcement schedule, which uses the classically conditioned reinforcer (Logan, 1979, p. 510).

In a hybrid conditioning system, the operant behavior is consistently reinforced or punished each time the desired behavior is exhibited via classically conditioned cues. This system reduced behavior to a process that relies on two subprocesses. Both of these subprocesses rely on timing, while one (the operant component) relies on a “cybernetic positive feedback component” (Logan, 1979, p. 538). By combining the two systems' power, a trainer can consistently reinforce or punish the desired behavior via the classically conditioned cue word. For example, a trainer can immediately say “Yes!” or “No!” based on the dog's behavior. The timing for the operant behavior is immediate, allowing for clear communication with the animal about the desired behavior. While this is highly effective, the trainer cannot disregard this method's classically conditioned cue word component. These classically conditioned cue words must be periodically reinforced to maintain their effectiveness. For the positive reinforcer cue word (“Yes!”), this means periodically delivering the intrinsic reinforcer (i.e., treat, food, praise).

For the positive punishment cue word (“No!”), this means reinforcing that cue via withholding the intrinsic reward or introducing an intrinsic punisher. This hybrid method allows for extremely effective communication in a constantly changing training environment and provides the clearest method of communication to the dog.

Social Learning

While not nearly as significant to dog training as classical and operant conditioning, social learning does earn its place here because it is a method by which dogs learn and can, in the right situation, be a useful tool for dog trainers. There is no question that dogs learn from each other. Young puppies learn basic manners and behavior from their mothers. Older dogs learn acceptable dog-dog interactions from each other. The question becomes, can dogs learn acceptable behavior by mirroring humans?

After a series of studies conducted by various dog trainers and researchers, the answer was a definitive yes: dogs do learn from watching humans. Research revealed two key factors in this conclusion. First, dogs are prepared to learn from humans at an early age. Dogs are born pre-programmed to learn from those in their social environment, including humans. This has become especially true as more dogs are bred in a controlled environment, and the first living thing they touch and interact with is a human (Hall et al., 2021, p. 8). The second influential factor is that the more experience dogs have with humans, especially training experience, can dramatically influence how dogs engage with humans in a social learning context (Hall et al., 2021, p. 8). Over the past 150-200 years, dogs have gone from being basic tools used on farms and hunting to being constant companions and engaging with humans in a wide variety of environments. This greater experience base has allowed dogs to evolve and be more receptive to understanding and learning from humans in these different contexts. Regardless of training methodologies, the

energy and body language a human displays to a dog in a novel situation can be a critical factor in determining a dog's response to that environment.

As it became clear that dogs can learn from humans via social behavior, it led to the rise of one of the more modern dog training movements, “Do as I Do.” Some argue that this training method is more effective than shaping/clicker training or operant conditioning, saying that it allows dogs to learn object-related actions consistently in a relatively short time (Fugazza & Miklósi, 2015). “Do as I Do” relies entirely on social learning to teach dogs object-related tasks via a goal-directed sequence of actions. An example of this form of training is demonstrated via the recently viral talking dogs. These dogs are trained to use programmed buttons to say different words to communicate with their humans. The dogs learn to use the button via the human modeling pushing the correct button in the appropriate context. Dogs learn that when the human pushes, for example, the “Outside” button, they are then taken outside. Through repetition of the human demonstrating the desired behavior, the dog eventually learns to push the button on its own to go outside when it wants to. While this “Do as I Do” training allows for some impressive results and talking dogs, it has extreme limitations in training high-level obedience and other behaviors.

Training Methods Through the Ages

Understanding how dogs learn is a critical component for dog trainers to be able to effectively execute their craft. With that being said, the techniques dog trainers have used have evolved dramatically over the past 100 years as a response to both new knowledge in behavior learning theory and public opinion.

Compulsion Based

A short thirteen years after Pavlov published his findings on classical conditioning, dog training as a science and profession had taken off. This movement was encapsulated with the publication of the first formal work dedicated entirely to dog training and the theories behind it, Konrad Most's *Training Dogs: A Manual*. This work was instrumental in the development of dog training and laid the foundation for many of the methodologies still in use today.

Most began his career working with dogs in 1906 at the Royal Prussian Police Headquarters. Here, he served as the Police Commissioner and began training service dogs for police work, using methods he developed himself (Most, 1954, p. 7). He published the first edition of *Training Dogs* in 1910. Following the outbreak of World War I, Most served under Field Marshal von Hindenburg, Commandeer-in-Chief in the East, where he handled the use of Army dogs on the Eastern Front. By the time the war ended, Most had seen several promotions and ultimately was in charge of all canine activity on both the Western and Eastern Fronts. Following the war, he led the Canine Research Department of the Army High Command and helped form the Canine Research Society and the German Society for Animal Psychology. Following World War II, Most continued his research into dogs and dog training, working with the Experimental Department at the Tutorial and Experimental Institute for Armed Forces' Dogs and the Technical Principal for the North German Dog Form, the leading center for training working dogs in Europe (Most, 1954, pp. 7-8). Most was known to have trained thousands of dogs over his long career, and at the time of his death in 1954, his work, *Training Dogs*, which had undergone several revisions, was the standard for dog training throughout Europe.

At the center of Most's work was the idea of compulsion-based training. Most opens his training manual with the simple statement that the material contained within its pages is

"intended to serve as a guide to a system of teaching both to the emotional and to the instinctive life of the animal" (Most, 1954, p. 17). He acknowledged that dogs resembled humans in several aspects, most importantly their emotional and instinctive reflexes. It is this resemblance that causes man to connect with dogs and adopt them into our daily lives. After this simple acknowledgment, Most addresses the central question surrounding dog training: whether to use kindness or compulsion to achieve the desired behavior. His response is an informative look into the foundation of his training philosophy:

> "A kind heart is certainly an advantage to a trainer, but this alone will not induce the dog to perform reliable service, nor will treatment by those who are anthropomorphically inclined and who constantly see 'sullen resistance' on the part of the dog, and inflict 'punishment' accordingly. Good training needs a kind heart as well as a cool and well-informed head for the proper direction of the indispensable compulsion" (Most, 1954, p. 24).

Most's position essentially encourages using compulsion to achieve the desired results but performing that compulsion in a level-headed manner that delivers the necessary punishment without being overly harsh.

While this is a fairly acceptable response on the surface, further reading reveals that the majority of the techniques were harsh at best and barbaric at worst. Most encourages a position that states that the only way to get a dog to perform a desired behavior that is not spontaneous or inherently rewarding is via compulsion (Most, 1954, p. 24). In his view, the trainer can force the dog to perform something that is unpleasant to them by presenting the dog with a consequence that is even more disagreeable. Performing this training method involves combining primary and secondary inducements to force the dog to perform the desired acts.

The primary compulsive inducements are those that many today are familiar with. Focused on the sense of touch, these methods are primarily mechanical operations – pulls, pressure, jerks, thrusts, and heaves (Most, 1954, p. 26). To enact these forces upon the dog, the trainer can use a variety of tools, such as the collar, choke collar, spiked collar, lead, and switch. The harshest of these tools was by far the switch. According to Most, the trainer should use the switch with a "lightning flick of the wrist" to cause the dog to experience pain while also forcing them into the desired behavior (Most, 1954, p. 26). In situations where the dog continually defies the trainer, the switch could be further employed in ways that today would qualify in some places as animal abuse. Most describes in his work the methods that should be used to deal with a dog who repeatedly ignores the trainer and even begins to display aggression toward them.

> For example, in the exception case in which the dog snarls at the trainer and a heavy cut with the switch does not stop him, a beating must follow … The switch should be employed until the animal submits and his will to resist, and the exasperation that accompanies it, is replaced by fear (Most, 1954, p. 36).

These primary compulsion methods relied entirely on physical force and scaring the dog into submission to its human master.

In addition to these primary compulsion inducements, Most also described an array of secondary compulsion inducements that could be used against a dog at a distance. These methods include the words and tone of voice spoken by the trainer, as well as their body language. While these techniques did not usually involve physically abusing the dog, they often had more detrimental psychological effects. Dogs naturally understand these inducements from childhood, and despite the emphasis Most puts on delivering training with a level head, yelling at the dog

and using aggressive body language naturally tears the dog down and puts them into a deep, submissive state rooted in fear.

While one would hope that the extreme methods encouraged by Most would be quickly disproven by subsequent trainers, unfortunately, they became the basis for training in Europe, especially for police and military working dogs. The Belgian Army, in particular, is known for its extreme training techniques. In a recent study of Belgian Army working dog teams, it was found that 60% of incorrect responses that occurred during obedience were punished with aversive stimuli, while 80% of incorrect responses that occurred during protection work were punished with aversive stimuli (Haverbeke et al., 2008, p. 118). The teams were observed engaging in multiple different aversive and compulsion-based training techniques, most notably “hanging” dogs. This training technique involves choking up on a dog's leash so that their airway is cut off, and they are essentially “hung” in their collars. Despite its widespread use in protection dog training, it is an extreme method that has proved largely ineffective. In the same study of the Belgian Army, it was found that the scores of dogs in protection work who were regularly “hung” were lower than those who were not or received some form of praise/reward (Haverbeke et al., 2008, p. 119). It was also noted that those dogs who were given toys as a reward were less distracted and more focused on their work, leading to less need for punishments (Haverbeke et al., 2008, p. 119).

These findings with the Belgian Army support a larger overall trend in the dog training community. Dogs trained using compulsion-based techniques and aversive stimuli have lower performance and are more stressed during and after training (Vieira de Castro et al., 2020). Despite the efforts of Konrad Most in his training manual to emphasize using compulsion in an even-handed way, his methodology does not stand up in today’s dog training environment. In a

study conducted in 2020, 110 years after Most first published his book, it was found that dogs who received rewards in training learned faster and had a higher success rate than those who received a combination of rewards and aversive stimuli and those who received only aversive stimuli (Vieira de Castro et al., 2020). While the work of Konrad Most is influential in jump-starting dog training as a profession and as a volume of literature, his methodology is outdated and largely ineffective in today's training environment.

Dominance Theory

The move to dominance theory is a natural progression from the early compulsion trainers and, in many respects, embodies the same day-to-day training style. Dominance theory relies on the premise that dogs evolved from wolves and that the social hierarchy of wolves directly relates to dogs and their relationship with humans. David Mech developed this concept in his 1970 book, *The Wolf: Ecology and Behavior of an Endangered Species,* which examined the behavior of captive wolves. Mech posited that wolves form packs, and the "alpha" wolf maintains the pack's social hierarchy (Mech, 1970). In this system, the "alpha" rules over a group of its peers and maintains its position within the social order through dominance and force. Wolves were observed engaging in conflict and fighting to establish and maintain their societal position (Mech, 1970). Dog trainers took this knowledge and jumped a step further, arguing that humans must be the "alpha" of their "pack" and dominate their dogs. This leads dominance trainers to encourage enforcing physical dominance over the dog, including but not limited to alpha rolls, staring them down, and aggressive body language (Yin, 2007). Dominance dog trainers rely entirely on social learning and rigidity but with a twist. Instead of allowing the dog to learn from the human's behavior in a more positive manner (true social learning), these dog trainers try to convey their status as "alpha" by meeting the dog in their social hierarchy. They do

not capitalize on the more efficient and effective classical and operant conditioning methods. This leads to a serious failure in training methodology and can have detrimental effects on the dog-human relationship.

While dominance theory persists today, this concept of being “alpha” has been largely disproved, most notably by Mech himself. Despite being the father of this theory and publishing its foundational ideas in his earlier book, Mech recanted in his 1999 landmark paper. In this paper, Mech acknowledged that his theories regarding alpha status and dominance theory were entirely based on studying wolves held in captivity. After further research conducted on wolves that lived their entire lives in the wild, Mech could not stand behind his earlier conclusions (Mech, 1999). By observing packs of wolves living in the northern Canadian wilderness, Mech concluded that the alpha structure was entirely a product of the wolves being forced together in captivity. In the wild, wolves still formed a social hierarchy, but it was not dominated by a single male alpha or an alpha pair. Rather, the wolf packs consisted of a breeding pair and their offspring from the previous 1-3 years. The breeding pair would lead the pack and raise the offspring, until such time as the offspring reached maturity. At this point, the offspring would disperse to form their own breeding pair and effectively start their own pack (Mech, 1999). For wolves in captivity, this cycle of a breeding pair with offspring regularly leaving is impossible. The wolves are held together for an extended period, making it essentially that a new, unnatural social order develops. Mech also noted that even in captivity, the social status that did emerge was not fixed. Wolves were known to gain and lose alpha status several times as the wolves constantly vied for position (Mech, 1999). Despite Mech changing his position and theories regarding alpha status, after twenty years in the mainstream, it was impossible to remove from the dog training psyche. The foundation had already been laid, even if science turned against it.

Dominance dog training remains a mainstream training style, albeit it does have its detractors. Many Gen X or older individuals will reference dominance theory concepts when asked about training their dog or correcting dog behavior. This is in large part due to how mainstream the training style was, and no trainer was more mainstream or vocal about dominance theory than Cesar Millan.

Millan came to the United States from Mexico in 1990 and started working as a dog groomer. In under a decade, Millan had fully launched himself onto the training scene by working with aggressive large breeds, primarily Rottweilers. His clients included high-profile A-list celebs such as Will Smith and Jada Pinkett Smith (Millan & Peltier, 2006, pp. 1-2). In an effort to create a place where these aggressive dogs could go to be rehabilitated and live happy lives, Millan opened his Dog Psychology Center in south Los Angeles. This is when *National Geographic* came calling and wanted to turn the work he was doing into a TV show. *The Dog Whisperer* was a hit, as millions of viewers connected with the struggles of owners and their dogs on TV. By his own admission, Millan was not "training" the dogs per se but rather focusing on dog psychology, touch, and energy to connect with the dogs on a natural and instinctual level. While this all sounds great, the science behind what Millan does with these dogs relies entirely upon outdated dominance theory and alpha/pack ideology.

In his first hit book, *Cesar's Way*, Millan spends an entire chapter discussing dog psychology but never once touches on how dogs learn and how a man can teach them something. His entire focus is on the energy of the dog and how humans need to capitalize on that energy to understand why a dog is doing what it is doing. While this is important and might lead to some marginal use, in a larger sense, it fails to address the problems the average pet owner faces. In the following chapter, Millan dives into his pack leader concept, which is the foundation for his

training style. His training philosophy focuses on establishing the human as the "alpha" of the pack and the dogs into the submissive role. One of the key techniques Millan uses is the dominance ritual, otherwise known as the "alpha roll." While Millan does preface that the dominance ritual is not a technique that he uses for all dogs, it is still a major part of his training style and is one of the most cited techniques he uses, both in his books and on his TV show. In this ritual, the human forces the dog to lie on its side until he signals submission (Millan & Peltier, 2006, p. 220). The basis for this maneuver is primitive wolf behavior displayed by the pack leader against subordinates. While it is undeniable that humans need to maintain leadership over their pets, forcing a dog into a submissive position is not the most effective, ethical, or beneficial technique. The most dangerous component of this dominant ritual is that when Millan does it, he is doing it as a trained and experienced dog trainer. The real threat comes when inexperienced owners try to duplicate what they have seen on TV or read in a book. There is a fine line between a training technique and animal abuse. Not to mention, a dog that truly has aggression or behavioral issues is already on a dangerous precipice. It does not take much for them to react and potentially bite someone. While the alpha roll works in some situations (Millan did not achieve fame for nothing) there are more effective ways that are more beneficial to both the dog and human.

While the dominant theory has been largely disproven and is no longer as mainstream as it was 20 years ago, it remains a powerful force in the dog training community. An entire generation of people grew up watching *The Dog Whisperer* and hearing similar training philosophies to the point that the concept of being "alpha" is no longer viewed as one of several training styles but rather as a basic fact of dog ownership. This is not the case. The concept of conditioning was present long before dominant theory, and it has persisted even after the decline

of dominance theory. This is because history naturally recognizes the more efficient and effective means of communication. While dominance theory is an option, there are better choices that are less dangerous and do less damage to the dog-human relationship.

Modern Day: Force-Free v. Balanced

Today's modern dog training landscape is a true duopoly between force-free training and balanced training. On the one hand, there are those who promote the force-free method. This training style is a direct reaction to the compulsion and dominance-based training that was popular in the past. Force-free training is a bit of a misnomer, as its definition changes depending on who is talking. For some, force-free means only using the two non-aversive quadrants of operant conditioning (positive reinforcement and negative punishment). In contrast, others say it can only involve positive reinforcement, and no punishment is allowed. Whether a trainer advocates for one or two quadrants of operant conditioning is irrelevant because both inherently occur. For someone who says they are only engaging in positive reinforcement, the act of NOT giving a treat when the dog has not performed the task is negative punishment. Society has just deemed that any form of training that uses "punishment" is bad. Therefore, trainers avoid calling it what it is.

Force-free training involves putting no force or pressure on the dog. Training, therefore, relies entirely on reinforcing the good and ignoring the bad. This form of training became popular as a direct reaction to the harsh dominant and compulsion trainers of the past. People did not like seeing their sweet, innocent Fido getting choked out or alpha-rolled, so society switched to a softer form of training. The most mainstream example of this form of training is *Do No Harm*.

The objective of the *Do No Harm* training philosophy is that trainers instruct the pet owner to never do any harm to the dog, whether it be psychological or physical. In their view, those who promote any form of training that involves the use of aversives, particularly shock collars, is just "animal abuse masquarad[ing] as dog training" (Michaels, 2022, p. 30). Instead of relying on harsher learning methods, *Do No Harm* trainers aim to start from the ground up to build a system where the dog achieves the desired behavior without conflict or punishment. This begins with establishing that all the dog's needs are met. To illustrate this, the author of The Do No Harm Dog Training and Behavior Handbook, Linda Michaels uses a very Maslow-esque pyramid. The foundation of this pyramid is the dog's biological needs, primarily nutrition, fresh water, exercise, safety, and shelter. Upon this level rests the emotional level, which contains the needs for security, love, trust, and consistency. The pyramid then builds into the social needs level. Here, trainers focus on meeting the dog's need to bond with people and other dogs. The penultimate level is the force-free training needs level. It is at this level that the *Do No Harm* training style resides. Finally, the capstone is cognitive needs. Dogs must be given a degree of choice, problem-solving, and novelty to fully meet their needs (Michaels, 2022, pp. 38-193). For *Do No Harm* trainers, it is only once the bottom three levels of the pyramid have been met that they can even consider engaging in training.

Once the dogs' basic needs have been met and trainers have reached the hierarchy level of force-free training, real work can begin. Force-free training is built upon the foundational principle that dog training is a two-sided coin (Michaels, 2022, pp. 254-256). On one hand, the concept is that rewarded behaviors will increase in frequency and have a greater tendency to be repeated. This is a direct development from both Pavlov and Skinner's research. On the opposite side of the coin is the concept that behaviors that are not rewarded will lessen in frequency and

ultimately disappear. Again, this concept is built directly off of earlier scientific work, especially that done by Skinner relating to operant conditioning and intermittent reinforcement schedules. Understanding the relationship between each side of the coin and how to best manipulate them is critical for any dog trainer, especially for those who call themselves “force-free.”

The problem with this method is that there are certain behaviors that MUST be corrected. An excellent parallel for this situation is parenting. No decent parent would allow their child to run out in the road, touch a hot stove, or punch their sibling. If a child engaged in these behaviors, they would receive a correction: whether that is a spanking, timeout, getting grounded, or some other method is irrelevant. The parent is applying a punishment. Dog parents must do the same thing. As much as owners love their dogs, they cannot let them run wild. Often, those who engage in force-free training choose to ignore or, worse, cannot fix the problems that led the owner to seek training. This is a direct result of the fact that it is impossible to communicate to a dog what they CANNOT do without giving them a punishment. For clear communication to exist, you must use all four quadrants of operant conditioning (Herbert, 2020).

Balanced training, however, recognizes this need and capitalizes on all the training theories, philosophies, and methodologies that came before to form a system that allows for the most clear and concise training possible. Balanced training recognizes the power of positive reinforcement and rewards. This quadrant truly does make up the vast majority of communication. However, it still allows for negative reinforcement, as well as both punishment quadrants. This opens the door for clear and concise communication with the dog. Another essential component of balanced training is that it can be easily adapted to fit a more hybrid conditioning model by introducing classical marker words. It also allows for social learning, both

from humans and peer dogs. Balanced training truly means balanced, as it capitalizes on all three ways dogs learn.

Explaining to pet owners how balanced training works is a complex challenge that faces today's dog trainers. Many pet owners view their dogs in a very anthropomorphic light. Explaining to owners that they are actually doing their dog good by putting into effect all four quadrants of operant conditioning and not relying solely on positive reinforcement takes skill and eloquence. Through interviews, one professional trainer frames it to her clients as helping them work with their dogs, not against them. In her initial communication with clients regarding her training style, which is textbook balanced training, she states:

> Everything we expect of them, (like obeying obedience commands) or tell them not to do, goes against who they are. This creates a lot of frustration and conflict for both dogs and their owners … [Dog training] is all about building a relationship with our dogs founded on trust, clear communication, cooperation, and mutual respect. There is a way we can work WITH our dogs, not against them, by fulfilling our dog's genetics and allowing the best parts of their unique personality to shine. My goal as a trainer is to help you and your dog work together in harmony, instead of constantly being at odds with each other. No one wants to be a drill sergeant for their dogs or have to bribe them with treats to get them to listen. There can be a beautiful balance between letting our dogs be free to make choices while still having them listen when we ask. This is why I train the way I do, because I believe that is the ultimate goal for dog owners (Barber, 2024).

The message that balanced trainers are trying to communicate is that even though balanced training does use punishments, these punishments should always be delivered in a calm, even-handed way, not out of spite or anger. The actions taken are always done for the dog's benefit and

never in a way to intentional harm. This is distinctly different from the similar rhetoric espoused by Konrad Most. Most was arguing solely for compulsion and punishment-based training. Balanced training, on the other hand, relies primarily on rewards and reinforcement. However, it is not afraid to use punishments when necessary. The entire objective is to create a training environment that capitalizes on the discoveries of the past and combines them in a way that allows for the most effective and efficient training possible. Over the past 200 years, dog training has evolved from a primitive yank-and-crank compulsion methodology to a psychology and learning-based system that relies on a single fundamental principle: clear communication between dog and human.

A key yet controversial way that balanced training achieves clear communication between dog and human is through the use of aversive tools such as the prong collar, slip lead, electronic collars (e-collars), and others. This immediately raises some owner's concerns, with many objecting to using these tools, saying, “That looks like a medieval torture device!” (Henley, 2023). In reality, these tools become key communicators when used in conjunction with operant conditioning. While all aversive tools work similarly in a balanced training system, the e-collar is the easiest to illustrate. It is important to remember that when examining the e-collar, first and foremost, it is a communication tool, not a means to administer discomfort or pain (Henley, 2023). When a dog has the e-collar on, it is controlled via a remote in the owner’s hand. A decent e-collar will have many different stim levels so the trainer can find the level where the dog can feel the stim, but it is not hurting them or causing any harm. The dog is then conditioned to the e-collar in a manner similar to how dogs learn leash pressure. In almost all forms of dog training, leash pressure is taught using the same basic principles. The dog learns that when pressure is added to the leash (positive punishment), it needs to stop pulling, and when pressure

is released (negative reinforcement), it is in the proper position. E-collar conditioning is achieved using the same principles and procedure. The dog learns that when they do not complete a behavior they already know (e-collars are not used for teaching, only for reinforcing), the stim turns on (positive punishment). When they complete the desired behavior, the stim turns off (negative reinforcement). This puts the dog in control of whether or not they receive a punishment. There is a clear communication channel between the dog and the owner regarding the desired behavior (Herbert, 2020-2021).

In addition to the communication methods enabled by e-collars and other similar devices, balanced training ultimately relies primarily on positive reinforcement. The scientific literature is clear that dogs who receive rewards perform better than those who only receive punishments (Vieira de Castro et al., 2020). No human would work a job and not expect a paycheck. The same is true for dogs. It is critical that balanced trainers truly employ balanced techniques and that they do not use harsh techniques that masquerade behind the "balanced training" façade. The reward needs to be something that is intrinsically valuable to the dog. Therefore, it can take many shapes (i.e., food, toys, praise) as the trainer must select a reward that best suits that specific dog (Herbert, 2020-2021). Regardless of which reward is selected, delivering them on time is crucial. This is where balanced training uses components of classical conditioning. As previously stated, it is possible to use classical conditioning to load marker words into the dog's brain. These marker works can then be used to reward the dog and/or trigger the dog to release to a reward. Successful application of these marker words, especially for rewarding the dog via positive reinforcement, is a crucial component of balanced training. A dog must know the exact moment he achieved the desired behavior and receive properly timed positive reinforcement.

This is only possible through a marker word that is then itself reinforced via the intrinsic value reward (Herbert, 2020-2021).

Because balanced training utilizes all four quadrants, it allows training to be more effective and efficient. When you are not handicapped with a positive reinforcement-only limitation, it is easier to communicate to a dog, "Do not do this; do this instead." In balanced training, it is possible to communicate to a dog both the exact moment it did something correctly and the exact moment it did something wrong. This allows for greater comprehension for the dog, quicker learning, and an overall better relationship between the dog and owner.

While the contrast between the two main methods of dog training in the modern day is extreme, ultimately, they both come from a place of good. Everyone wants to train the dog to achieve the desired behavior while simultaneously doing what is best for the dog. While there is a strong argument that balanced training is the most effective methodology, ultimately, deciding which methodology to use is a decision that should be made between the pet owner and their trainer to ensure they do what is best for that individual dog.

Personal Experience

My passion for dog training was birthed entirely out of my own experience. In June 2017, I brought home the most perfect doodle mix, whom I named Esmeralda Louise, Essie for short. Within days of bringing her home, I realized she had great trainability, and I began to explore different avenues of things I could train her to do. I knew nothing during this time. YouTube, the internet, and books were my main teachers. Essie and I learned together as we went. I am grateful that Essie is a forgiving dog when it comes to my training mistakes. Within six months, Essie already knew how to walk politely on a leash, had excellent sit and down stays, could take it and leave it on command, and was an overall well-mannered puppy. We achieved this,

unknowingly, primarily through a combination of classical conditioning and force-free training. Like many pet owners, I was just beginning my training journey and did not know anything different. We also took training classes at big box pet stores, which are notorious for championing force-free training.

By Essie's first birthday, I had an incredibly well-trained dog who was excelling in her training classes and our individual training sessions. I decided Essie had extreme potential and began to train her to achieve her therapy dog title and register with Pet Partners International. My journey through the dog training literature was beginning to take me in a different direction than the philosophies these classes were promoting. The big box store classes were entirely force-free, and there were some specific areas in Essie's life that we were struggling with training, for example, off-leash obedience. At a distance, if Essie lost interest in me, she would go about what she wanted to do with absolutely no consequences. I could not get over the challenge of how to communicate the finer details of training to her. So, I started googling "how to train a dog off-leash," "how to communicate clearly with your dog," and many other similar queries. What I found ignited a passion. Professional trainers such as Ivan Balbanov, Ed Leerburg, and Michael Ellis introduced me to the world of competitive dog sports. While I recognize that my little doodle mix would never compete in protection dog sports, their methodologies intrigued me. They seemed to open up greater training capabilities for Essie and me. Enter balanced training. Essie was well-trained, but we did have definite communication holes, primarily due to my lack of understanding of operant conditioning. These new philosophies and training methodologies seemed like a way to fix our issues.

As my lack of education became more and more apparent to me, I began to do extensive research into balanced training and operant conditioning. I wanted to do right by Essie and be the

best trainer for her possible. It was around Essie's second birthday that I first put a prong collar on her. Through the guidance of the dog training material I had been practically inhaling for over a year, I began the slow process of conditioning her to the prong collar and what leash pressure meant. While Essie understood leash pressure to an extent, using the prong collar and/or slip lead made this communication channel a million times clearer. Our next step was introducing the e-collar. This was the first major mistake I made in Essie's training. There is a reason I am now adamant that no one uses an e-collar unless they know what they are doing, and truthfully, at this time, I thought I did. I was so wrong. I accidentally caused Essie to become collar-smart. She knew she only had to behave when the e-collar was on, or I had the remote. I also was using the e-collar at too high of a stim level. While this did not hurt Essie physically, it did result in too harsh of corrections that hindered effective communication. After three months of trying to work through our problems with the e-collar, I decided to bail and put it away, planning to work on it again at a future date.

Despite the struggles of learning effective operant conditioning and the e-collar disaster, in the summer of 2018, Essie and I achieved an important milestone. We passed our therapy dog team test and became a registered therapy dog team with Pet Partners International. Walking out of that test, I was so incredibly proud of Essie. She passed with flying colors and demonstrated that she had what it takes to be a successful working dog and help others as a therapy dog. Some of my favorite memories with Essie are when we get the privilege of going to nursing homes, schools, hospitals, and other various therapy dog events. Everyone always loves her, and she consistently demonstrates her poise and training as she connects with each individual while remaining focused on me. Therapy dog work with Essie is the thing I am most proud of with her.

By the spring of 2020, COVID had hit, and I was looking to clean up Essie's training and push her to a new level. With these goals in mind, I contacted Dave Herbert of Canine Karma Training. When I had that first introductory call with Dave, I had no idea that my entire training philosophy was about to change yet again.

Dave taught me that while balanced training is important, there is another component that is even more influential that I had been neglecting: my relationship with Essie and her emotions while working. It was at this moment that I truly dove into the psychological component of dog training. While I had understood the basic tenets of classical and operant conditioning, Dave taught me how to combine these tools and move to the more effective hybrid conditioning training style. I fully classically conditioned Essie to her five marker words (yes, good, no, nope, get it) and gained a fuller understanding of how these marker words interact with operant conditioning. It was at this crucial juncture, when I had a thorough understanding of how Essie learned and how that impacted our relationship, that I truly became a dog trainer. While Essie and I had success prior to this moment, my ability to work with dogs other than Essie multiplied tenfold. The understanding and skills I learned have enabled me to train another family pet, Edgar, and work with various friends and family dogs. It has also allowed me to communicate with professional trainers who work with Essie and Edgar on a higher level for a more effective training experience.

Most importantly for Essie, I was able to go back and recondition the e-collar and turn it into one of our most used and valuable tools. Through an extensive process of classically conditioning Essie that the sight of the e-collar is a good thing and not a punishment, we defeated her collar-smartness. I then began to use my knowledge of operant conditioning to recondition the stim so that it became a clear line of communication instead of a harsh punishment Essie did

not understand. Today, when I get the e-collar out, Essie gets excited. First, the e-collar itself is exciting to her because of the classical conditioning. By extension, she knows she is going to get to do something fun. When she receives a stim correction from the collar now, it is no longer a harsh punishment but a clearly communicated positive punishment. She knows if she corrects her behavior, it will result in a negative reward (the stim goes away). She understands how to turn the stim on and off with her behavior. Our communication is clear and concise because I understand operant conditioning, and more importantly, Essie understands it.

My story demonstrates the key takeaway of this entire thesis. While people can train their dogs and have some success wandering blindly through the wilderness, true success and ability occurs once the human understands the principles behind the training. Now that I have a solid knowledge base and have communicated the basic tenets to Essie, it has become incredibly easy for us to work together as a team. There is no need for excessive punishment, dominance, compulsion, or other extreme force. While punishments are used, they are always measured and appropriate for the situation. Since our training breakthrough in 2020, Essie and I have improved our relationship dramatically, and Essie has demonstrated that her level of training can reach new heights. She is now consistently reliable off-leash, stronger and more confident, has a higher level of obedience, and, most importantly, is a happier dog! Essie and I are currently experimenting with social learning via communication buttons and improving her off-leash reliability. Each day is a new adventure with my four-legged best friend. With my solid understanding, the sky is the limit for Essie and me.

Future Expectations

Personally, I believe the most effective way to train a dog is through balanced training. It is what I use on my personal dog and what I encourage those I interact with to use. Like many pet owners, I went on my own journey of discovering what training methodology works best for me and my pet. Six years after that initial decision, I know it was the best thing I could have done for myself and my dog. That being said, a deep divide remains in the dog training community. As balanced training becomes more mainstream, it faces more opposition from force-free trainers. This is a direct reaction to the training methodologies of the past. It is undeniable that the methods used by some compulsion-based and dominance theory trainers are painful at best and animal cruelty at worst, but this is not what balanced training is. In an ideal world, more and more pet owners would recognize the value of balanced training and adopt it in their own lives for their own dogs. Unfortunately, this is not the direction society is heading.

Today's balanced trainers face extreme pushback in many countries around the world. Again, the best example of this pushback is the banning of e-collars. Many organizations that support force-free training celebrate the fact that e-collars have been banned in several countries worldwide, including Germany, Finland, Denmark, Sweden, and Wales (Todd, 2023). A notable addition to this list is England. Following lobbying by British animal welfare organizations, Parliament passed a ban on shock collars in November 2022. This ban officially went into effect on February 1, 2024. These organizations, which in England included The Kennel Club, Dogs Trust, the Royal Society for the Prevention of Cruelty to Animals, the Battersea Dogs & Cats Homes, The British Veterinary Association, and the Blue Cross, are proud of the fact that they have convinced governments to support their training ideology and continue to push for these bans to be adopted in the United States (Todd, 2023).

Currently, dog training remains unregulated in the United States. This lack of regulation is likely a result of the strong commitment to freedom that is central to American culture. Even though electronic collars and balanced training in general remain legal in the United States, several prominent organizations have publicly denounced them. People for the Ethical Treatment of Animals (PETA) has long been a staunch opponent of anything that causes dogs harm, so they naturally are strong supporters of a ban on e-collars and prong collars. Their website has several long articles about the dangers of using these tools ("Prong and Shock Collars," n.d.). PETA is not the only American organization to take a strong stand against balanced training. In a 2021 handout, the American Veterinary Society of Animal Behavior (AVSAB) issued a statement entitled "Humane Dog Training Position Statement." Within this 4-page work, the AVSAB firmly advocates for a force-free position. AVSAB recommends that only reward-based training methods be used because, in their opinion, aversive training causes damage to both animal welfare and the human-animal bond (American Veterinary Society of Animal Behavior, 2021). This pushback against these training tools extends to corporations. In 2020, Petco released a news release that they would no longer be selling electric collars in an effort to "strengthen its commitment to positive reinforcement training methods and solidifying the company's evolution from a leading pet specialty retailer to a category-defining health and wellness partner for pets and pet parents" ("Stop the Shock," 2020). Petco's change in position was a direct response to the social movement at the time. The company relied on a 2020 study by Edelman Intelligence that surveyed pet parents nationwide and found that 70% felt that shock collars had a negative effect on their pet's health and wellbeing, and 69% responded that they felt shock collars were a "cruel training method" ("Stop the Shock," 2020).

These moves indicate the prevailing sentiment regarding balanced training, especially the components that involve aversive techniques. People view their dogs as family and, as such, are not prepared to inflict the necessary punishment. While that statement sounds harsh, one must realize that the punishment is not inflicted to be cruel but rather to have a clear line of communication with the dog in a way that they understand. Society's shift to a force-free position that relies entirely on rewards does not benefit dogs, but hinders the ability of dogs and humans to communicate effectively.

Conclusion

After thoroughly examining the mechanisms of dog training and the history surrounding it, it is easy to see how understanding these different components is crucial to being an effective dog trainer in the modern day. Many who are currently advocating for force-free methodology do not fully understand the four quadrants of operant conditioning. Moreover, they do not recognize how critical using all four quadrants is to effectively communicating with the dog. It is only when an individual, whether a professional dog trainer or the average pet parent, understands the basic principles behind dog training that they can make an informed decision about which training methodology they will subscribe to and implement that chosen methodology to the greatest extent.

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