AVSAB

Position Statement on the Use of Dominance Theory in Behavior Modification of Animals

American Veterinary Society of Animal Behavior

www.AVSABonline.org

AVSAB is concerned with the recent re-emergence of dominance theory and forcing dogs and other animals into submission as a means of preventing and correcting behavior problems. For decades, some traditional animal training has relied on dominance theory and has assumed that animals misbehave primarily because they are striving for higher rank. This idea often leads trainers to believe that force or coercion must be used to modify these undesirable behaviors.

In the last several decades, our understanding of dominance theory and of the behavior of domesticated animals and their wild counterparts has grown considerably, leading to updated views. To understand how and whether to apply dominance theory to behavior in animals, it's imperative that one first has a basic understanding of the principles.

Definition of Dominance

Dominance is defined as a relationship between individual animals that is established by force/aggression and submission, to determine who has priority access to multiple resources such as food, preferred resting spots, and mates (Bernstein 1981; Drews 1993). A dominance-submissive relationship does not exist until one individual consistently submits or defers. In such relationships, priority access exists primarily when the more dominant individual is present to guard the resource. For instance, in a herd comprised of several bulls and many cows, the subordinate males avoid trying to mate when the dominant bull is near or they defer when the dominant bull approaches (Yin 2009). However, they will mate with females when the dominant bull is far away, separated by a barrier, or out of visual sight. By mating in this manner, subordinate bulls are not challenging the dominant bull's rank; rather, they are using an alternate strategy for gaining access to mates.

In our relationship with our pets, priority access to resources is not the major concern. The majority of behaviors owners want to modify, such as excessive vocalization, unruly greetings, and failure to come when called, are not related to valued resources and may not even involve aggression. Rather, these behaviors occur because they have been inadvertently rewarded and because alternate appropriate behaviors have not been trained instead. Consequently, what owners really want is not to gain dominance, but to obtain the ability to influence their pets to perform behaviors willingly —which is one accepted definition of leadership (Knowles and Saxberg 1970; Yin 2009).

Applying Dominance Theory to Human-Animal Interactions Can Pose Problems

Even in the relatively few cases where aggression is related to rank, applying animal social theory and mimicking how animals would respond can pose a problem. First, it can cause one to use punishment, which may suppress aggression without addressing the underlying cause. Because fear and anxiety are common causes of aggression and other behavior problems, including those that mimic resource guarding, the use of punishment can directly exacerbate the problem by increasing the animal's fear or anxiety (AVSAB 2007).

Second, it fails to recognize that with wild animals, dominance-submissive relationships are reinforced through warning postures and ritualistic dominance and submissive displays. If the relationship is stable, then the submissive animal defers automatically to the dominant individual. If the relationship is less stable, the dominant individual has a more aggressive personality, or the dominant individual is less confident about its ability to maintain a higher rank, continued aggressive displays occur (Yin 2007, Yin 2009).

Key Points

- Despite the fact that advances in behavior research have modified our understanding of social hierarchies in wolves, many animal trainers continue to base their training methods on outdated perceptions of dominance theory. (Refer to *Myths About Dominance and Wolf Behavior as It Relates to Dogs*)

- Dominance is defined as a relationship between individual animals that is established by force/aggression and submission, to determine who has priority access to multiple resources such as food, preferred resting spots, and mates (Bernstein 1981; Drews 1993). Most undesirable behaviors in our pets are not related to priority access to resources; rather, they are due to accidental rewarding of the undesirable behavior.

- The AVSAB recommends that veterinarians not refer clients to trainers or behavior consultants who coach and advocate dominance hierarchy theory and the subsequent confrontational training that follows from it.

- Instead, the AVSAB emphasizes that animal training, behavior prevention strategies, and behavior modification programs should follow the scientifically based guidelines of positive reinforcement, operant conditioning, classical conditioning, desensitization, and counter conditioning.

- The AVSAB recommends that veterinarians identify and refer clients only to trainers and behavior consultants who understand the principles of learning theory and who focus on reinforcing desirable behaviors and removing the reinforcement for undesirable behaviors.

The AVSAB emphasizes that the standard of care for veterinarians specializing in behavior is that dominance theory should not be used as a general guide for behavior modification. Instead, the AVSAB emphasizes that behavior modification and training should focus on reinforcing desirable behaviors, avoiding the reinforcement of undesirable behaviors, and striving to address the underlying emotional state and motivations, including medical and genetic factors, that are driving the undesirable behavior.

People who rely on dominance theory to train their pets may need to regularly threaten them with aggressive displays or repeatedly use physical force. Conversely, pets subjected to threats or force may not offer submissive behaviors. Instead, they may react with aggression, not because they are trying to be dominant but because the human threatening them makes them afraid.

Third, in the wild, even in dominance-submissive relationships that are well-established, the relationship lasts only as long as the higher-ranking individual is strong enough to retain this rank. Thus, high rank may be short-lived in both human-animal and animal-animal relationships.

Overall, the use of dominance theory to understand human-animal interactions leads to an antagonistic relationship between owners and their pets.

The Standard of Care

The AVSAB emphasizes that the standard of care for veterinarians specializing in behavior is that dominance theory should not be used as a general guide for behavior modification. Instead, the AVSAB emphasizes that behavior modification and training should focus on reinforcing desirable behaviors, avoiding the reinforcement of undesirable behaviors, and striving to address the underlying emotional state and motivations, including medical and genetic factors, that are driving the undesirable behavior.

How Leadership Differs from Dominance

The AVSAB clarifies that dominance and leadership are not synonymous. In the human-related fields of business management and sociology, where leadership is studied extensively, leadership is defined broadly by some as "the process of influencing activities of an individual or group to achieve a certain objective in a given situation" (Dubrin 1990, in Barker 1997). Despite this definition, which includes influence through coercion, scholars in these fields recommend against the use of coercion and force to attempt to gain leadership (Benowitz 2001). Coercion and force generate passive resistance, tend to require continual pressure and direction from the leader, and are usually not good tactics for getting the best performance from a team (Benowitz 2001). Additionally, those managers who rule through coercive power (the ability to punish) "most often generate resistance which may lead workers to deliberately avoid carrying out instructions or to disobey orders" (Benowitz 2001).

Similarly with pets, leadership should be attained by more positive means—by rewarding appropriate behaviors and using desired resources as reinforcers for these behaviors. Leadership is established when a pet owner can consistently set clear limits for behavior and effectively communicate the rules by immediately rewarding the correct behaviors and preventing access to or removing the rewards for undesirable behaviors before these undesirable behaviors are reinforced. Owners must avoid reinforcing undesirable behaviors and only reinforce the desirable behaviors frequently enough and consistently enough for the good behaviors to become a habit (Yin 2007).

Finally, AVSAB points out that while aggression between both domesticated and wild animals can be related to the desire to attain higher rank and thus priority access to resources, there are many other causes. These are discussed in detail in multiple veterinary behavior textbooks (please see www.avsabonline.org for helpful articles). Consequently, dominance should not be automatically presumed to be the cause of such conflicts, especially when the conflict occurs within a human household. Instead, a thorough medical and behavioral assessment should be conducted on all animals involved in the conflict to determine the true cause or causes of the aggression.

Conclusion

The AVSAB emphasizes that the use of scientifically sound learning principles that apply to all species is the accepted means of training and modifying behavior in pets and is the key to our understanding of how pets learn and how to communicate with our pets.

REFERENCES

American Veterinary Society of Animal Behavior. 2007. AVSAB Position Statement–Punishment Guidelines: *The use of punishment for dealing with animal behavior problems.* http://www.avsabonline.org/avsabonline/index.php?option=content&task=view&id=119.

Barker, R. 1997. How can we train leaders if we don't know what leadership is? *Human Relations* 50(4):343-62.

Benowitz, E.A. 2001. *CliffsQuickReview: Principles of Management.* New York: Hungry Minds.

Bernstein, I.S. 1981. Dominance: The baby and the bathwater. *J Behav Brain Sci* 4:419-57.

Drews, C. 1993. The concept and definition of dominance behavior. *Behaviour* 125: 284-313.

Knowles, H.P., and B.O. Saxberg. 1971. *Personality and Leadership Behavior.* Reading, MA: Addison-Wesley.

Yin, S. 2007. Dominance Versus Leadership in Dog Training. *Compendium Continuing Education for the Practicing Veterinarian* 29:414-32.

Yin, S. 2009. Dominance vs. Unruly Behavior. *In Low Stress Handling, Restraint and Behavior Modification of Dogs and Cats.* 52-73. Davis, Calif.: CattleDog Publishing.

Myths About Dominance and Wolf Behavior as It Relates to Dogs

MY DOG GREETS ME BY JUMPING UP, STEALS FOOD BEHIND MY BACK, TRIES TO CLIMB INTO MY LAP TO BE PETTED, AND OFTEN IGNORES ME WHEN I CALL HIM TO COME. ARE THESE SIGNS OF DOMINANCE? No. In animal social systems, dominance is defined as a relationship between two or more individuals that is established by force, aggression, and submission in order to gain priority access to resources (Bernstein 1981; Drews 1993). Most unruly behaviors in dogs occur not out of the desire to gain higher rank, but simply because the undesirable behaviors have been rewarded. For instance, dogs jump on people and climb into their laps because when they do so, they get attention. Similarly, dogs fail to come when called if they are being rewarded by the objects or activities that are distracting them. Even stealing food when humans are not watching is not a play for higher rank. In the wild, lower-ranking animals steal resources when higher-ranking animals are not around to guard the resources. This is an alternate strategy for obtaining the resources they want. Those who are rewarded by success are more likely to continue stealing in this manner.

Because dogs are related to wolves, we should use wolves as a model for understanding dogs. While we can get ideas of the types of behaviors to study in dogs based on what we know about wolves, the best model for understanding domestic dogs is domestic dogs. Dogs have diverged significantly from wolves in the last 15,000 years. Ancestral wolves evolved as hunters and now generally live in packs consisting most often of family members (Mech 2000). Pack members cooperate to hunt and to take care of offspring. In a given year, generally only the alpha male and alpha female mate, so that the resources of the entire pack can be focused on their one litter. Dogs, on the other hand, evolved as scavengers rather than hunters (Coppinger and Coppinger 2002). Those who were the least fearful, compared to their human-shy counterparts, were best able to survive off the trash and waste of humans and reproduce in this environment. Currently, free-roaming dogs live in small groups rather than cohesive packs, and in some cases spend much of their time alone (MacDonald and Carr 1995). They do not generally cooperate to hunt or to raise their offspring, and virtually all males and females have the opportunity to mate (Boitani et al. 1995). Marked differences in social systems, such as those just described, inevitably lead to notable differences in social behavior.

I hear that if you think a dog is dominant, you should roll him on his back in an "alpha roll" and growl in his face because that's what an alpha wolf would do.. In a pack of wolves, higher-ranking wolves do not roll lower-ranking wolves on their backs. Rather, lower-ranking wolves show their subordinate status by offering to roll on their backs. This submissive roll is a sign of deference, similar to when someone greets the queen or the pope by kneeling. Consequently, a more appropriate term for the posture would be a submissive roll (Yin 2009).

Even if wolves don't roll subordinates on their back, it seems to work in some cases. Should I try it anyway if my dog is aggressive? The most common cause of aggression in dogs is fear. Pinning a dog down when he is scared will not address the root of his fear. Furthermore it can heighten the aggression (AVSAB 2007). In fact, a recent study of dogs (Herron et al. 2008) found that confrontational techniques such as hitting or kicking the dog for undesirable behavior, growling at the dog, performing an "alpha roll," staring the dog down, and enforcing a "dominance down" frequently elicited an aggressive response from the dog. The aggression may also be redirected toward inanimate objects, or other animals or people besides the owner. Even non-physical punishment, such as a harsh verbal reprimand or shaking a finger at a dog, can elicit defensive aggression if the dog feels threatened by it.

I have heard that to be the boss or leader, you have to go though doors first: walk ahead of the dog like wolves do. In a wolf pack, the highest ranking wolves only lead the hunt a fraction of the time (Peterson et al. 2002). Furthermore, when they are hunting, they do not keep a tight linear formation based on their rank.

Since the alpha goes first, should you eat before your dog? Higher-ranking wolves don't necessarily have priority access to food. Once a wolf has possession of food, he may not give it up to another wolf regardless of his rank. When food is not yet in possession of either wolf, ritualized aggression (snarling, lunging) may still occur, with the higher-ranking wolves usually winning.

Feeding dogs treats will cause them to become dominant. Even among wild animals, sharing of food does not relate to dominance. Adult wolves frequently regurgitate food for puppies. Males of other species frequently court females by bringing food to them. Giving a dog a treat when he jumps up or barks at you can result in unruly behavior. However this does not teach him that he is higher ranked or has priority access to resources. If you would like to teach him to wait

politely for a treat you can wait until he sits or lies down patiently and then give him a treat.

Will growling or trying to bite a dog or making a claw with your fingers mimic what a wolf does when he growls at or bites a subordinate?
There are no studies on this. However, as an experiment, you might ask a friend who has been bitten by a dog whether poking him with your fingers bent in claw formation has an effect that's similar to when he was bitten, or whether your growling or biting seems similarly ferocious. In general, we shouldn't assume that our actions mimic those of a dog or a wolf. Rather, we should evaluate each of our interactions with our pets and observe their response to determine how the pet perceived it.

REFERENCES

American Veterinary Society of Animal Behavior. 2007. AVSAB Position Statement–Punishment Guidelines: *The use of punishment for dealing with animal behavior problems.* http://www.avsabonline.org/avsabonline/index.php?option=content&task=view&id=119.

Bernstein, I.S. 1981. Dominance: The baby and the bathwater. *J Behav Brain Sci* 4:419-57.

Boitani, L., F. Francisci, P. Ciucci, and G. Andreoli. 1995. Population biology and ecology of feral dogs in central Italy. In *The domestic dog: Its evolution, behaviour and interactions with people*, ed. J. Serpell. 217-244. Cambridge: Cambridge University Press.

Coppinger, R., and L. Coppinger. 2002. Dogs: *A New Understanding of Canine Origin, Behavior, and Evolution*. New York: Scribner.

Drews, C. 1993. The concept and definition of dominance behavior. *Behaviour* 125: 284-313.

Herron, M., F.S. Shofer, and I.R. Reisner. 2008. Safety and efficacy of behavior modification techniques used by dog owners. In *2008 ACVB/AVSAB Scientific Paper and Poster Session*. New Orleans, La., July 18, 2008.

MacDonald, D.W., and G.M. Carr. 1995. Variation in dog society: Between resource dispersion and social flux. In *The Domestic Dog: Its Evolution, Behaviour and Interactions with People*, ed. J. Serpell. 199-216. Cambridge: Cambridge University Press.

Mech, David 1999. Alpha Status, Dominance and Division of Labor in Wolf Packs. *Canadian Journal of Zoology*. 77:1196-1203. http://www.mnforsustain.org/wolf_mech_dominance_alpha_status.htm (accessed November 11, 2008)

Mech, L.D. 2008. What every happened to the term alpha wolf? *International Wolf.* (http://www.wolf.org/wolves/news/iwmag/2008/winter/winter2008.asp)

Peterson, R.O., A.K. Jacobs, T.D. Drummer, L.D. Mech, and D.W. Smith. 2002. Leadership behavior in relation to dominance and reproductive status in gray wolves, *Canis lupus. Canadian Journal of Zoology.* 80:1405-12.

Yin, S. 2009. Dominance vs. Unruly Behavior. In *Low Stress Handling, Restraint and Behavior Modification of Dogs and Cats.* 52-73. Davis, Calif.: CattleDog Publishing.

© 2008 AVSAB American Veterinary Society of Animal Behavior